

**Submission to the Intellectual Property and
Competition Review**

**Department of Industry, Science and Resources
November 1999**

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1. Executive summary

The Department of Industry, Science and Resources (ISR) agrees with the Intellectual Property and Competition Review Committee's view that there is no inherent conflict between the objectives of intellectual property law and competition law.

Consequently, this submission focuses on a range of issues that impact on how well the intellectual property system meets the needs of Australians, and which may affect competition. Given the role of ISR, the submission focuses in particular on industrial property issues.

While knowledge has always been important to economic development and the competitiveness of firms, this is increasing with the rapid growth in technology and globalisation of the world economy.

In order to reap the benefits of this knowledge, Australia not only needs to have an effective intellectual property system, but also needs to ensure that its trading partners have such systems. Ideally, the system should be well understood, cost effective, accessible, provide certainty, and be flexible enough to handle emerging technologies such as biotechnology and computer software.

Given the broader national and international framework in which it operates, Australia's intellectual property system already goes a long way towards meeting these objectives. This is supported by *The World Competitiveness Yearbook 1999*, produced by the Institute of Management and Development in Switzerland, which rated Australia's patent and copyright protection the third strongest in the world. Nevertheless, there are issues facing Australia, which must be addressed both nationally and at the international level.

At an international level, the world intellectual property system needs further harmonisation and a reduction in duplication of work, as well as ensuring that most countries have reached certain minimum standards for protection.

Australia should continue its work within the World Intellectual Property Organization (WIPO), the World Trade Organization (WTO), the Asia-Pacific Economic Forum (APEC) and other international fora, to ensure that these issues are tackled. In association with WIPO and APEC, as well as bilaterally, Australia should continue to provide assistance to developing countries in our region. This will help them meet the minimum standards set by the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and in particular help them to tackle some judicial and enforcement issues.

There is a need to improve the knowledge and awareness of Australian firms on how to use the intellectual property system as a strategic tool to enhance their business. This will enable Australians to receive effective benefits from the intellectual property system both internationally and domestically. The intellectual property system is an important part of the innovation and commercialisation process – both as a source of information for generating new ideas, and as a key tool in a firm's business strategy. ISR, including IP Australia, is developing and managing a number of programs aimed

at increasing awareness. We believe that this work needs to be continued and expanded if Australians are to benefit. IP Australia has implemented a program of regular customer surveys, which will provide more background information for policy makers.

Australia's patent, trade mark and design legislation has been comprehensively reviewed over the last decade, resulting in the introduction of the *Patents Act 1990* and the *Trade Marks Act 1995*. New legislation to replace the *Designs Act 1906* is currently being drafted, and substantial amendments will be made to the Patents Act to introduce second-tier patents. Ongoing reviews of the new legislation have been undertaken, and these will continue.

Current issues relating to patents, trade marks and designs revolve around the threshold of protection, consistency of examination, and the cost of enforcing intellectual property rights. While views vary, some interest groups have raised the question as to whether current standards of patent examination are appropriate. In response to these issues, IP Australia has released an issues paper on patentability standards. More recently, the Advisory Council on Industrial Property (ACIP) considered the issue in a report on enforcement of industrial property rights. IP Australia is currently examining what can be done to address these issues, and will consult with interest groups when putting advice to the government.

ISR is aware of calls to improve the coordination of intellectual property policy and administration in Australia. We note that there are arguments for and against bringing the responsibility for all intellectual property matters within a single portfolio. Irrespective of any decision about this, there will always be overlap of responsibilities between government agencies, due to the wide range of interests and knowledge encompassed by 'intellectual property'. It is therefore important that there is effective coordination between portfolios.

2. Purpose of the submission

The purpose of this submission is to:

- outline some key issues that should be considered in reviewing the intellectual property system, and summarise recent developments on these issues;
- provide background about the intellectual property system, including a summary of its objectives, how it works, and its context within the broader international, government and business environment;
- provide information about the role of ISR and IP Australia, within the intellectual property system.

3. Introduction¹

ISR is responsible for issues affecting industry, business, science and technology, research, resources, sport, recreation, and tourism. ISR provides quality analysis and policy advice to the government on these issues, and delivers programs that aim to:

- improve national prosperity and well-being
- improve the competitiveness of Australian business
- foster excellence in Australian science and technology, and sport
- maximise the national benefits of research and innovation
- increase productive investment in Australia
- ensure our natural resources are managed sustainably
- expand market access for Australian business.

As a division of ISR, IP Australia is responsible for administering the industrial property system comprising patent, trade mark and industrial design rights. It also provides policy advice on industrial property issues, promotes intellectual property awareness, and engages in international activities to improve industrial property protection for Australians in other countries.

4. Major intellectual property issues facing Australia

Intellectual property rights are the legal rights that result from intellectual activity in the industrial, scientific, literary and artistic fields. These rights include statutory rights (such as patents, trade marks, copyright) and common law rights (such as confidential information). The intellectual property system in Australia not only includes the administration of the rights, but also includes the legal processes that enforce them².

With the increasing importance of knowledge and innovation to economic growth, the effective management of intellectual property is an important factor for business success. Intellectual property rights are a key tool that firms can use to maintain their competitiveness and to grow. However, it is only one of a number of critical factors in the innovation process. This is reflected in preparation for the upcoming National Innovation Summit, to be held in February 2000. Of the six working groups that were established to examine critical innovation issues for the Summit, one specifically relates to intellectual property protection.

¹ Further information about the role of ISR and IP Australia is provided in sections 5.2 and 5.3.

² A more detailed explanation of the intellectual property system is provided in section 5.1.

4.1 The interaction between intellectual property and competition policy

The Issues paper (September 1999) released by the Intellectual Property and Competition Review Committee discusses the interaction between intellectual property law and competition policy (pages 4-6). This submission agrees with the argument outlined in the issues paper, that there is no inherent conflict between the objectives of intellectual property law and those of competition law.

A 1998 report by the Organisation for Economic Co-operation and Development (OECD), *Competition Policy and Intellectual Property Rights*³, notes that at the highest level of analysis, intellectual property rights and competition policies are complementary. This is because they share a concern to promote technical progress to the ultimate benefit of consumers:

'...long-standing notions about conflict between intellectual property rights and competition policy should be reconsidered. Intellectual property rights, like rights in other forms of property, are necessary for the functioning of a competitive, market-based economy.'

The report also discusses the issue of intellectual property rights and market power:

'Competition policy cases involving intellectual property licensing have often been based on the presumption that the holder of an intellectual property right automatically had market power based on that right. The granting of a patent, however, has no necessary relationship with market power. Even where the patent relates to a commercially viable product or process, that product will likely face alternative technologies in the market place, limiting its market power. Thus, to the extent that the competitive effects of an intellectual property licensing agreement turns on the market power of the property, competition policy authorities need to review carefully the market situation of the property rather than merely to assume that market power exists.'

The National Competition Council (NCC) recently reviewed section 51(3) of the *Trade Practices Act 1974*, which exempts certain conditions in licences or assignments of intellectual property rights, from provisions of the Act. The Council's report (March 1999)⁴ concluded that there is no inherent clash between intellectual property rights and competition law. It also concluded that the exemptions, while helpful to provide certainty, were not strictly necessary as they were valid under the application of competition law.

The objective of both intellectual property law and competition law is to maximise social welfare. Intellectual property law seeks to protect intellectual property rights, and in so doing, stimulate innovation and economic growth. Competition law reflects the premise that consumer welfare is best served by removing impediments to competition.

Competition authorities have acknowledged that innovation and technological progress contribute much to social welfare and competition and this effect may be more significant than

³ OECD 1998, *Competition Policy and Intellectual Property Rights*, DAFFE/CLP(98)18.

⁴ National Competition Council 1999, *Review of s.51(2) & 51(3) of the Trade Practices Act 1974 - Final Report*.

the elimination of short-term inefficiencies resulting from non-competitive prices⁵. Consequently, there is recognition that the impact of intellectual property measures on competition today needs to be understood in the broader context of their effect on promoting competition in new products and processes tomorrow.

Just as the economic benefits of intellectual property law can be understood in a competition policy context, so can the benefits of competition policy be understood within the context of intellectual property law. Within intellectual property law there is debate about some practices that may be anti-competitive. However, the remedy proposed is not the application of competition law, but rather the modification of intellectual property law and procedures⁶.

Thus, ISR agrees with the NCC view and considers that intellectual property rights and competition policy are complementary means of achieving efficiency in a market economy⁷.

Consequently, this submission focuses on a range of issues relating to the intellectual property system and its administration. These affect the costs of the system, and the benefits that it provides to the Australian economy, and can have implications for competition. Given ISR's role, they particularly relate to industrial property.

ISR notes that next February's Innovation Summit will also address many of these issues.

4.2 Economic framework

For the economy as a whole, innovation lies at the heart of productivity and employment growth. For the nation, innovation is about how the skills of the workforce and management are combined with capital, in ever more productive combinations, to provide a central driver of economic growth and improved living standards. Fostering an environment that rewards innovation is therefore a powerful lever in raising productivity and growth. Countries that recognise the central role of innovation and productivity growth, and shape their policies accordingly, will enjoy higher living standards, and a positive impact on employment. Investing in innovation is therefore vital for the future prosperity of Australians.

In recent years, major changes have appeared within the world economic environment:

- *The growth in information and communication technologies (ICTs)* - has led to the emergence of a whole new range of products and services, and has transformed production processes. This trend will accelerate with the much broader acceptance of electronic commerce. It is changing the way firms operate, changing the way they relate to customers, suppliers and competitors, and is spreading best practice. It is providing unprecedented access to information and markets for firms and individuals.

⁵ Barro, R. May 1981, *Economic Growth in Cross-Section of Countries*, Quarterly Journal of Economics, 106:2, pp.407-444 and Demsetz, H. April 1992, *How Many Cheers for Antitrust after 100 Years?*, Journal of Economic Inquiry, pp. 207-218.

⁶A paper by the OECD (OECD 1997, *Patents and innovation in the international context*, OCDE/GD(97)210, Paris), discusses a range of possibly anti-competitive activity that may need to be addressed in developing international IP law.

⁷ This view is elaborated on in an OECD report (OECD 1998, *Competition Policy and Intellectual Property Rights*, DAFFE/CLP(98)18).

- *Increased speed of scientific and technological advances and their diffusion* - is placing pressure on firms to respond more rapidly to the opportunities and challenges being presented by scientific and technological change. It is also encouraging firms to collaborate and network in order to reap economies of scale and scope.
- *The globalisation of the world economy* - is resulting in greater global competition. This is driven by reduced transport and communication costs, and is fostered by trade, investment and capital market liberalisation. While this poses new challenges for firms, it also offers tremendous opportunities for them to take advantage of scale economies and to capitalise on their competitive advantage. These changes are also forcing governments to reassess their industry policies - and in developed economies, to reassess the nature of their competitive advantage.
- *The growing awareness of the value of specialised knowledge embedded in organisational processes* - is being reflected in growing market value to book value ratios of knowledge-based firms.

In this environment, benefits exist for individual firms, providing a key to increased competitiveness. In a world where tastes and technology change rapidly, where information moves quickly and good ideas are quickly copied or superseded, there is constant pressure to come up with something new and better. Customers expect more and have more choice, and success depends on being able to meet the needs of more discerning and demanding customers. Innovation is an important tool that is used to meet customer needs, and achieve and maintain competitive advantage.

In an increasingly globalised and competitive business environment, Australian firms must be world competitive to win and keep new markets. The firms that prosper will be the ones that are enterprising and skilled enough to differentiate their product and create a distinctive competitive edge - either by containing costs, or by a commitment to continuous renewal through innovation, or both.

In recognition of the importance of the global market place to Australian firms, ISR is developing a set of principles, which will more precisely define the nature of national benefits that the government expects to accrue through their support of research and development (R&D). They favour the development and commercialisation of R&D in Australia, while recognising that in some circumstances firms may need to develop their product overseas. In either instance, the adequate protection of the intellectual property associated with these projects is critical to accruing national benefit.

If firms are to reap these benefits, effective protection for intellectual property is essential. This provides firms and individuals with a mechanism for obtaining returns on their intellectual investment. Without effective intellectual property protection, many of these innovators would not be prepared to undertake such investments. Additionally, the system assists with the diffusion of technology by providing databases and tradeable rights.

A report by Mark Rogers, of the Melbourne Institute of Applied Economic and Social Research⁸, summarises the findings of empirical studies of the intellectual property system as follows:

- studies for OECD countries have shown that the private value of patent stock is equivalent to a 10 to 30% R&D cash subsidy
- survey data on Australian firms in the late 1970s indicated that a loss of patent protection would cause R&D to fall by 7-12%⁹
- a study on the market value of firms suggested that for Australia, an additional patent application had increased market value by \$7 million and an additional trade mark by \$1.4 million
- while the links between intellectual property rights and export performance are not known with certainty, there is a correlation between share of world patenting activity and share of world high technology exports
- stronger intellectual property rights seem to be associated with larger inflows of foreign direct investment.

The report also acknowledges that there are difficulties in assessing the value of the intellectual property system. The value of intellectual property rights appears to vary substantially across industries and across firm size. In addition, the distribution of the value of individual intellectual property rights is highly skewed, with most patents having very low value, and only a few having high values. This reflects the difficulty of predicting the value of innovative activity and R&D. It is certainly not clear that substituting an intellectual property system with a different type of policy (for example government grants) would remove this problem. Indeed, patents have an advantage over other administratively feasible innovation support programs in that they are the only one that is incentive compatible (ie. rewards commercially successful results). In most cases, alternative support programs (for example, public sector research, subsidisation of private R&D) are unlikely to represent a cost-effective substitute for patents.

There is always a trade-off between aligning with international standards, and providing a system that is tailored to Australia's needs. This trade-off was discussed by the Bureau of Industry Economics (BIE) in its report, *The Economics of Patents*¹⁰. The BIE concluded

'...it does not appear to be in the broad national interest to alter the system in any way that contravenes international conventions and agreements and thus may invoke trade or political retaliations. On the other hand, neither is it in Australia's national interest to pursue the protection of patent rights beyond accepted international norms.'

Clearly, as a signatory to the WTO and TRIPS agreements, Australia must have an intellectual property system that meets the minimum standards laid down in TRIPS. To do otherwise risks the broader trade benefits of the WTO agreement. As well as encouraging local R&D, the system also needs to provide a level of intellectual property protection that will encourage foreign firms to invest and bring their technology to Australia.

⁸ Rogers, M. 1999, *The Economic Value of the Intellectual Property System*, Melbourne Institute of Applied Economic and Social Research.

⁹ The Australian Bureau of Statistics also conducted two surveys of Australian business on their innovation activities, for the periods 1991-1994 and 1994-1997. It is difficult to draw firm conclusions about the relationship between the intellectual property system and innovation from these surveys. (See *Innovation in Australian Manufacturing*, 1994; *Innovation in Manufacturing*, 1996-7; and *Innovation in Mining*, 1996-7).

¹⁰ Bureau of Industry Economics 1994, *The Economics of Patents*, Occasional Paper 18, AGPS, Canberra.

Given its relatively small population, Australia does not have the resources to undertake R&D in all technical areas. Even in areas where R&D is taking place, Australia cannot always be expected to be a leader in the field. Consequently, to prosper and grow, it is important that Australia has access to the latest technology or products. Intellectual property protection provides an incentive for foreign firms to invest in Australia and import their know-how. The benefits of encouraging this investment are that employment is created, the level of expertise in those technologies is increased, and further innovation is stimulated in the form of 'spin-off' innovation.

However, as the intellectual property system in Australia is strengthened, local firms have less opportunity to imitate imported technology, causing the rate of imitation and thus innovation to decline¹¹. Thus having a system that significantly exceeds the TRIPS standards could disadvantage Australian firms without any offsetting benefits in other markets.

This argument is further strengthened, as Australia is a net technology importer. However, the position is not clear cut:

- A Productivity Commission staff research paper, *Trade-Related Aspects of Intellectual Property Rights*¹², examines trade statistics for commodity groups that are heavily dependent on patents, copyrights and trade marks. The paper found that in 1996-97 (the most recent period analysed) Australian imports far exceeded exports for patent-related goods. Nevertheless, the paper notes that the proportion of patent-related exports increased compared to imports, reflecting the rising importance in Australian exports of R&D intensive products. The importance of patent-related products has increased for both exports and imports over the last 20 years. The paper also notes that the difference between patent-related exports and imports has narrowed in recent years.
- A recent summary in *The Economist*¹³ indicates that the Australian balance of payments for technology is close to neutral.
- The position varies significantly with industry sector, as Australia is a net exporter in some technology fields, and a net importer in others. For example, Australia is a clear technology exporter in the mining sector, and a net importer for pharmaceuticals¹⁴.

Given the above trade-off, ISR considers that Australia should maintain an intellectual property system that is comparable in strength with those in the major developed countries. Any variation to this approach should be considered on a case by case basis, as with the extension of term for pharmaceutical patents.

The above analysis has focussed to a large degree on inventions and thus patents. But an important aspect in the innovation process is the styling or aesthetic appearance of articles. Modern design is important in establishing product differentiation and brand loyalty¹⁵. There

¹¹ Maskus, K. July 1997, *The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer*, Prepared for the Conference, 'Public-Private initiatives after TRIPS: Designing a Global Agenda'.

¹² Revesz, J. 1999, *Trade-Related Aspects of Intellectual Property Rights*, Productivity Commission Staff Research Paper, AGPS, Canberra.

¹³ *The Economist*, 21 August 1999, page 89.

¹⁴ Revesz, J. 1999, *Trade-Related Aspects of Intellectual Property Rights*, Productivity Commission Staff Research Paper, AGPS, Canberra.

¹⁵ Australian Law Reform Commission 1995, Report no. 74, *Designs*.

has been economic debate about whether this creates any social value. Nevertheless, in many well-established industries and technologies, where competing products provide similar features and functionality, styling and aesthetic appearance is often the feature that will give a competitive edge. Furthermore, the appearance may comprise a substantial proportion of the value of a product.

Trade marks, business names and internet domain names all enable firms to differentiate themselves and their products from their competitors. The economic justification for trademarks and related protective devices is straightforward. Firms invest resources in developing a certain quality of product, and they must have an easy way of alerting potential customers to it, and informing them about it. Consumers benefit from having a variety of different brands from which to make a choice, and from the knowledge that they can have a high degree of certainty about the source of the product they have bought. The social benefits of trademarks may therefore include differentiated products appealing to consumers' preference for variety, and lower search costs for consumers due to absence of confusion, which is the largest social gain.¹⁶

4.3 Australian intellectual property within the global economy

The changing global environment means that firms now need to protect their intellectual property in a number of countries. This has resulted in a rapid growth in the number of patent and trade mark registrations. It has placed considerable pressure on registration systems that are nationally based, leading to attempts to improve their administration. These have revolved around altering the system to make multi-country registration easier. Examples include the Patent Cooperation Treaty (PCT) and the Madrid Protocol for trade marks. There have also been efforts to set minimum international standards for protection, and to better harmonise the national systems and reduce duplication of search and examination work. With the rapid change in technology and globalisation of the world economy, these pressures can only intensify.

4.3.1 Alignment of Australian intellectual property system with international standards

Australia has long been a member of the main international conventions relating to intellectual property. These international agreements require certain minimum standards of intellectual property protection, and aim to internationalise the operations of the system by making it easier to access the national systems. Australia became a party to the Paris Convention for the Protection of Industrial Property on 10 October 1925. Since then, Australia has continued to join numerous international intellectual property agreements and treaties¹⁷. The most notable in recent times is TRIPS. Australia's intellectual property system complies with the standards set out in these agreements and treaties.

Given the trade-offs discussed in section 4.2, we believe that overall the balance of the Australian intellectual property system is appropriate. For example, one area where Australia is providing a higher standard than the minimum required by TRIPS is the possibility of an extended term for pharmaceutical patents. The purpose of this is to assist pharmaceutical companies by addressing the long development time required before pharmaceuticals can be

¹⁶ United Nations Conference on Trade and Development (UNCTAD) 1996, *The TRIPS Agreement and developing countries*, United Nations, Geneva.

¹⁷ These are set out in section 5.1.

released on the market. A number of other countries (for example, the United States and the European Union) have similar provisions. Extensions of the standard 20 year maximum are available for up to five years depending on when marketing approval was granted in Australia. This extension is to allow for an 'effective' patent life (the time that the patent can be exploited on the market) of up to fifteen years. The government took this position after extensive consultation with various interest groups.

4.3.2 The impediments to exploiting Australian intellectual property in overseas markets

If Australian firms are to gain the benefits from their innovation and creativity, they need to be able to exploit it, not only in Australia but also overseas. Globalisation of the world economy will provide unprecedented opportunities for this.

There are circumstances where the Australian economy has not gained the potential benefits from an innovation. For example, local firms have been taken over by foreign interests, which have then reaped the benefits of their intellectual property. This had led to a perception that, while many Australian firms have been successful in developing innovative products and processes, they are often less successful in commercialising their intellectual property. This is especially acute for small and medium-sized enterprises, which often lack the expertise, management skills, and foreign reach that larger corporations can muster.

It should be noted that these concerns are not restricted to intellectual property matters. In general, Australian firms doing business overseas need to invest significant resources during the preparation stage – deciding which markets to enter, developing partnerships, and obtaining market intelligence (for example, on cultural considerations, distribution systems and government regulations). As a result, a number of government programs are in place to assist firms (particularly small and medium enterprises) in gaining access to information about other countries' requirements. These programs can assist firms in covering some of the costs involved in undertaking market research, but there is little available information on overseas intellectual property systems. For example, Austrade can provide exporters with considerable information about the United States' food, automotive, and engineering markets, but has no comparable level of information on the United States' intellectual property system.

While a number of Australian firms have been very successful in exploiting their intellectual property in overseas markets, more needs to be done to improve the level of awareness and knowledge amongst Australian firms of international intellectual property systems. This needs to be part of a general awareness-raising approach to make firms, particularly small and medium enterprises, aware of how they can use their intellectual property rights as part of an overall commercialisation strategy. Such an approach would help ensure that firms understand the value of their intellectual property rights, and that these are included in their list of assets. The awareness raising activity being undertaken by IP Australia to address this problem is discussed in section 4.4.

Seeking intellectual property protection overseas can be difficult and costly. For example, seeking patent protection internationally could cost well in excess of \$100 000. If a firm wants worldwide protection for its intellectual property, it must apply for protection in each national intellectual property office. Despite efforts to harmonise the intellectual property protection systems, Australians have to deal with a number of different systems. Efforts have been made and are still ongoing to remove the differences and to streamline the processes. Also, there is

often duplicated effort, with many offices conducting the same search and examination work for the applications that a firm makes. With offices starting to give "full faith and credit" to the work that has already been done by other offices, the amount of rework and therefore additional costs that Australians experience should decrease.

As well as this, the enforcement of intellectual property rights can involve further significant costs (for example, in the United States, litigation costs of US\$1 million or more are not uncommon). Variations in judicial and other enforcement systems can add to the complexity. For some countries, the timeliness and effectiveness of these systems may be poor due to lack of resources.

To enable Australian exporters to protect their goods and services more effectively, the Australian government has worked on two broad and related fronts. Firstly, it has actively participated in a range of international fora to develop the world's intellectual property systems to make them more effective. Secondly, it has provided direct assistance to developing countries, particularly in the Asia-Pacific region, to help them to implement effective intellectual property systems.

Through its involvement with international fora such as the WTO, WIPO and other fora such as APEC, Australia has been able to influence the development of intellectual property systems throughout the world. This has ranged from agreement to minimum standards that national systems must meet through TRIPS and various WIPO treaties, to endeavours to better harmonise systems and to eliminate duplication of work currently occurring across national intellectual property offices.

IP Australia has been actively involved in the development of a number of treaties that have streamlined the administrative processes, namely the Trademark Law Treaty and the Patent Law Treaty (PLT). It has also taken part in a series of continuing international symposia on cost reduction in patenting, organised by the International Federation of Industrial Property Attorneys (FICPI) and the American Intellectual Property Law Association (AIPLA).

As an example, negotiations within the international community for the PLT are still underway. A Diplomatic Conference will be held in Geneva next May. Australia is actively involved in these negotiations. The proposed Treaty is designed to streamline and harmonise the administrative formal requirements set out by national patent offices for the filing of patent applications and the maintenance of patents. These requirements concern issues such as obtaining a filing date, and other administrative requirements relating to an application, including electronic filing, representation of the applicant by others, conditions for extension of time limits and restoration of rights and priority claims. However, negotiations on the PLT mean that a number of significant areas of harmonisation (such as the first to file/first to invent and grace period issues) are outstanding.

In relation to the second front, IP Australia has taken an active role in assisting a number of developing countries in the region to align their systems with these international standards, principally TRIPS. This has been through a variety of different programs, which have provided advice and assistance in setting up their intellectual property systems (for example, through various staff training programs).

While significant progress has been made in countries meeting the minimum TRIPS requirements and in harmonisation, further work needs to be done. Many developing countries will need assistance to meet TRIPS standards, particularly in the area of enforcement. It is in Australia's interests to provide such assistance, so that Australian exporters will be more familiar with those countries' intellectual property systems. There are still significant challenges ahead, if greater harmonisation of the administration and enforcement of intellectual property rights is to occur. Additionally, the awareness-raising activity among Australian firms, business advisers, and educational and research institutions, needs to be continued and expanded.

4.3.3 Australia's negotiating position under TRIPS

TRIPS is one of the set of agreements making up the international trade system administered by the WTO. TRIPS sets minimum standards for protection of intellectual property. Industrialised member economies have been bound by TRIPS since 1996, and most developing countries are due to meet TRIPS standards by January 2000. Since TRIPS was established in 1995, reviews of some aspects of the agreement have begun. TRIPS is also due to be reviewed in its entirety in 2000¹⁸.

ACIP, which advises the Minister for Industry, Science and Resources on industrial property issues, held a consultation workshop on 12 October 1999. The purpose of the workshop was to obtain industry input on a range of issues relating to TRIPS. This input will be provided to the government through the Minister for Trade, for consideration in the context of deciding Australia's approach for the WTO Ministerial Conference to be held in Seattle in November 1999. The conference will decide on the agenda for a new trade round to start in 2000.

Issues discussed at ACIP's consultation workshop included:

- biotechnology, particularly the protection of plant and animal inventions
- biodiversity, farmers' rights and indigenous peoples' rights
- transfer of technology and test data protection
- patent priority and patenting of software
- compulsory licences and competition law
- geographical indications (GIs) and traditional expressions (TEs)
- well known trade marks and domain names
- parallel imports and exhaustion of rights.

ISR's view is that full implementation of TRIPS standards will bring significant improvements in intellectual property protection for Australian firms in established and emerging overseas markets. Any move to change the existing arrangements under TRIPS brings with it a risk that some of the benefits may be watered down or lost altogether. At the same time, the existing provisions of TRIPS would benefit from some further clarification and elaboration of their intended purpose.

4.3.4 Parallel importation and Australia

Parallel importation is the importation of goods, produced with the authority, or under the control, of the intellectual property rights owner in the country of origin, by persons other than the official distributors and licensees of the intellectual property rights owner in the country of import.

¹⁸ Further discussion of TRIPS is provided in section 5.1.

At present, parallel importation is possible for patents, trade marks and designs in limited circumstances. Whether or not the intellectual property rights owner in Australia is able to control parallel importation depends on the particular facts of the case in question, and which intellectual property right is being asserted. In some instances, consent to parallel importation may be implied from the circumstances surrounding the original sale of goods. The person who releases the goods onto the market overseas may be in a position to give a licence to import the goods into Australia if they also own the intellectual property rights in Australia. If the person who first releases the goods onto the market overseas has no connection with the Australian rights owner, no licence can be given or implied, and the consent of the Australian rights holder would be needed to bring the goods into Australia. A pharmaceutical product must be registered on the Australian Register of Therapeutic Goods to be marketed in Australia.

Where branded goods are produced overseas by, or with the consent of, the Australian trade mark owner, an unofficial distributor will be able to import the goods into Australia without the consent of the trade mark owner. If a registered design is applied to goods overseas by, or with the authority of, the Australian owner, a parallel importer will generally not require the design owner's consent to import those goods into Australia. The exclusive rights given by a patent are very broad. The exclusive rights to exploit the invention include the right to regulate importation of the patented goods.

The current situation has not given rise to any significant issues and we do not see a need to change the existing provisions in the intellectual property legislation.

4.4 Intellectual property as part of the innovation and commercialisation process

Only a few of the many innovative products and processes introduced around the world are commercially successful. The process of developing a new idea into a successful commercial product involves significant effort and risk. Considerable resources need to be committed to develop the new product or process, and to involve the people who will manufacture, promote, sell and use it.

Successful commercialisation of a new idea usually includes the following steps:

- identifying a market opportunity
- obtaining and managing resources
- research and development
- protecting intellectual property
- product design
- obtaining supplies
- manufacture
- promotion
- distribution, sales and service.

It is clear from the above list that while intellectual property protection may form an important part of the process, success also depends on many other factors. For example, obtaining venture capital at the beginning of the process, and developing reliable manufacture, distribution, sales and service systems, can be critical to the success of the project. While the

cost of intellectual property protection is usually only a very small part of the overall cost of commercialisation, it can be critical to financial success.

As well as providing protection of intellectual property, the intellectual property protection system also provides a source of information that is useful for identifying market opportunities, and in the R&D process. The patent database is a unique source of past and present technological information. There are more than 30 million patent specifications worldwide, with about half a million new specifications published each year. The publication of the patent specification is often the first publication of the invention, and up to seventy per cent of the information in patents is not published anywhere else¹⁹. Interested parties can access this information to determine the latest advances in a technological field. This enables them to make informed decisions on where to best direct their research resources, and to make sure they are not infringing the rights of others. It also provides a source of information, which can be used to develop follow-on products that do not violate the scope of the original patent.

This view is supported by the Law Council of Australia in its submission to the NCC²⁰. The Law Council argued that publication of patent material was one of the primary reasons for many pharmaceutical, biotechnical and transgenic developments over the past 10 to 20 years:

'The published material has spawned developments by way of leading to 'lateral' discoveries by others seeking to find a way around the patent and to vertical discoveries by others building on the disclosed patent material to make an improvement.'

Nevertheless, anecdotal evidence suggests that this resource is underutilised by industry. Anderssen²¹, for example, noted that there is little use of patent information by Australian industry, contrasting with the more considerable use made of patent databases in the developing Asian economies.

Over recent years, major intellectual property offices have placed their databases on the internet. This information is usually available free of charge, and supplements a number of commercial databases containing intellectual property information. Thus, Australians now have unprecedented access to this data.

Clearly, it is also important to choose the most appropriate strategy for protecting the intellectual property. Using patents is one of a number of strategies available to protect technology. Inventors may also rely on other forms of protection such as secrecy, know how, confidential information, or common law rights. The most appropriate strategy for intellectual property protection varies. For example, where product life cycles are short, or in process development, where 'know how' is important, patenting may not be the most appropriate option. It has also been suggested that, with the increasing ease of access to patent information via on-line databases and the internet, some firms may alter their intellectual property strategy. Thus, the value of trade secrecy as an alternative to patenting may be enhanced²².

¹⁹ WIPO April 1993, *Patent Information – what it is and how useful it is for technology development or technology transfer*, WIPO National roving seminars on the patent system and the use of patent information for technological development, India, WIPO/PI/IND/93/2.

²⁰ Law Council of Australia, *Response to National Competition Council's Issues paper of June 1998*.

²¹ Anderssen, H. 1995, *The Economics of Intellectual Property*, Working Paper 104, Bureau of Industry Economics, page 55.

²² OECD, 1997, *Patents and innovation in the international context*, OCDE/GD(97)210, OECD, Paris.

But many products and processes do not lend themselves to other avenues of protection. In industries such as pharmaceuticals where R&D costs are high but replication relatively simple, patent protection is of more significance.

Prospective owners of intellectual property rights often make their applications before completing an evaluation of an idea or invention's commercial potential or sorting out marketing details. Applications are an indication of marketing intent only. Developing new products and services involves many risks, not the least of which is that they may not be marketable. An invention may be way ahead of its time. A product or service that costs more than its competition may fail in the reality of the marketplace. Many applications, made with the prudent commercial intention of covering all possible bases, often do not proceed for equally prudent commercial reasons.

If an innovation is going to be sold or licensed through a third party, a registered design or patent may be essential. Formal intellectual property protection allows purchasers to obtain information without the innovator losing control of his or her idea. It also gives both parties a clear understanding of the precise boundaries of the item that has been sold or licensed. This is an important consideration for trade marks, given their indefinite life span.

The intellectual property system plays an important role in the marketing. Product differentiation and reputation are becoming increasingly important to firms' competitiveness. Major corporations are recognising that brand names are one of their most important long term assets. Trade marks are often the basis of marketing and world wide spending on advertising and franchising is rapidly expanding. Similarly, as consumers become more demanding, firms use innovative designs to secure a market advantage and create a distinctive market presence.

A recent study²³, which looked at the value of 60 global brands, found that brand value can form a significant proportion of market capitalisation. The aim of the study was to enable firms and investors to assess the contribution of brands to business and their role in delivering long-term shareholder value. For example, the study found that Coca-Cola is the world's most valuable single brand, with a brand value of US\$83 billion. Nike, IBM and Apple were found to be more dependent on the strength of their brands than any other global firms as a percentage of market capitalisation.

As noted in section 4.3.2, many Australian firms, particularly smaller firms, are not aware of what intellectual property they own or how to use it for competitive advantage. Anecdotal evidence and ongoing, structured market research conducted by IP Australia confirm this. The research indicates that Australian firms have only a limited knowledge of the intellectual property system, and of how to use the system as a strategic management tool in their business. There is also similar evidence that the system is not well understood in tertiary education and research institutions. Without an effective understanding of the system by firms and the research sector, the likely result is less than optimal returns from innovation and the possible loss of business from Australian firms to overseas competitors.

A number of activities have been undertaken to improve the management and awareness of intellectual property:

²³ *What the billion dollar brands are really worth*, Australian Financial Review, June 26-27 1999.

- IP Australia has commissioned market research to survey users and potential users of the intellectual property system about a number of different aspects, including:
 - their awareness and use of the intellectual property protection system
 - how best to develop and deliver IP Australia's services - for example, whether those surveyed want to use different technologies to gather information and lodge applications
 - the decision making processes firms go through when deciding to create and exploit their intellectual property.

This program has been recently renewed and a new survey program initiated that will be carried out over time to enable trends to be identified and the impact of existing programs to be monitored. Previous surveys of IP Australia's customers have reinforced the message that public awareness of the benefits of intellectual property and the benefits of protecting intellectual property rights has been quite low, and that there is an urgent need to raise it.

- IP Australia has implemented a broad marketing strategy targeting users and potential users of the system. To date, awareness activities include printed literature, CD-ROMs and seminars aimed at small business and business advisers. Considerable effort has gone into development of the IP Australia web site as a key source of disseminating information. Projects that are currently being developed include:
 - an information product on the commercialisation of intellectual property, aimed at small business advisers
 - a program for school age children
 - a program for the tertiary education sector
 - a relationship marketing program targeting current IP Australia customers and key influencers such as patent attorneys, the media, and international intellectual property offices
 - cooperative projects with other groups who are delivering messages about intellectual property, such as Biotechnology Australia (a multi-portfolio agency located within ISR) and the intellectual property area of the Department of Defence.
- Biotechnology Australia is developing strategies to enhance intellectual property awareness and management skills within the biotechnology industry and research sectors to ensure that Australia captures the benefits of its research.
- ISR is also considering strategies to enhance intellectual property awareness and management skills for industry more generally.

While progress to date in raising intellectual property awareness in Australia is promising (and arguably, leading edge in world terms), further work is planned, with more projects likely to be identified in light of the latest round of IP Australia market research.

4.5 Content and scope of intellectual property rights

4.5.1 Reviews of patent, trade mark and designs legislation

Australia's patent, trade mark and design legislation has been comprehensively reviewed within the last decade:

Patents

The *Patents Act 1990* replaced the *Patents Act 1952*, and implemented a number of policy changes flowing from the Industrial Property Advisory Committee's (IPAC) 1984 review of the Australian patent system. The changes were introduced to strengthen the standards of patentability for standard patents (by testing inventions for novelty and inventive step against prior publication anywhere in the world rather than just in Australia). The changes also improved a number of administrative matters, ranging from examination of patent applications to enforcing patent rights in the courts. The new Act was drafted to avoid unnecessary complexity, and with more user-friendly language. Where possible, it was confined to matters of principle, leaving procedural matters for the regulations.

After the Act was introduced, interest groups were consulted about the operation of the Act and regulations, and amendments have been introduced where needed. The most recent amendments occurred in 1998-99. They will allow IP Australia to provide an improved level of service to patent applicants, allow for extensions to the term of patents for pharmaceutical substances, and introduce changes resulting from the review of the regulatory regime for patent attorneys.

In light of a report by ACIP, the government has announced its intention to introduce innovation patents. Legislation is being prepared to implement this. Innovation patents would replace the petty patent system, which has been in operation since 1979. Petty patents were designed to provide a quick and cheap form of patent protection for inventions with a short commercial life. However, the system is not well used.

Trade Marks

A comprehensive review of the trade marks legislation began in 1990, with the resulting *Trade Marks Act 1995* coming into effect on 1 January 1996. The new Act incorporated outcomes from extensive public consultation undertaken during the review, and provides a more streamlined trade mark registration system. New features introduced by the Act included:

- a broader definition of what may constitute a trade mark, to include sounds, smells and aspects of packaging
- multiclass applications, removing the need to file separate applications for each class of goods or services
- merging the separate parts of the Register so that there is no distinction between trade marks with respect to the rights they acquire on registration
- the abolition of registered users, associations and mandatory disclaimers.

A post-implementation review of the *Trade Marks Act 1995* is being undertaken in consultation with interest groups, who regard the legislation as successful on the whole, but

recommended a number of amendments to improve it. Legislation will be prepared once the consultation process is complete.

Designs

On 16 February 1999, the government announced that it intended to implement significant changes to the Australian registration system for industrial designs and the *Designs Act 1906*.

This followed a major review of the existing system by the Australian Law Reform Commission (ALRC), involving extensive consultation with interest groups. The Commission concluded that the current design registration system needs to be improved by clearer definitions; stricter eligibility and infringement tests; a more streamlined process for registration; and better enforcement and dispute resolution procedures. It found that the current system is not striking an effective balance, there is little to prevent free riding and many design owners do not consider the system cost effective.²⁴

Key features proposed for the new system include:

- higher threshold and broader infringement tests to make a design registration harder to obtain but, once obtained, more valuable by making it easier to enforce
- a streamlined registration system which allows for quick and cheap registration of a design
- a reduced term of design registration from 16 to 10 years to provide a more appropriate level of incentive in the designs system.

The Commission looked at the innovation threshold for designs, and considered extending the boundaries on design protection beyond aesthetic designs, to certain types of functional design. It concluded that functionality equates to a low-level innovation, which would be better covered by a lower form of patent protection. The Commission recommended that designs should focus on visual appearance, and that any gap in the protection of function should be considered by ACIP in its review of the petty patent system. The government accepted this.

Public consultation will occur before the legislation is finalised.

4.5.2 Overlap of rights

Overlap between different types of intellectual property rights can occur. This reflects differences in rationale for the rights, which were designed independently to protect different types of products and works. Yet at the boundary, the distinction between the different types of rights can become blurred, and different systems may be used to protect the same intellectual property or aspects of the same intellectual property.

Protecting different aspects of a product under various rights may be quite legitimate, and within the policy objectives of the system. For example, a patent may protect the way a product works, its external appearance may be protected by an industrial design, and its brand name may be protected by a trade mark. However, in some cases of overlap it may be possible to obtain greater protection than intended, unless the legislation specifically prevents it.

Some examples of the overlap are discussed below.

²⁴ Australian Law Reform Commission 1995, Report no. 74, *Designs*

Trade mark and copyright

A trade mark can consist of a letter, number, word, phrase, sound, smell, shape, logo, picture, aspect of packaging or any combination of these. Many trade marks also incorporate copyright material where that material also meets the criteria of the *Copyright Act 1968* (for example, literary, artistic or musical works). It is important to keep in mind that the two regimes are for essentially different purposes. Copyright protects ‘creative’ expression while the essential purpose of a trade mark is to identify the trade source of the goods or services. Each set of protection will provide the same material or parts of the same material with different enforcement options. Whether these provide real solutions for infringement of rights will depend on the individual circumstances of the case. IP Australia has no data on how often the trade mark/copyright infringement overlap has featured in court decisions or other enforcement actions.

Designs and copyright

Similarly, owners of copyright in artistic works may seek protection for some works by registering them as industrial designs. Artistic works include paintings, drawings, sculptures, engravings, buildings and works of artistic craftsmanship. A design means features of pattern, ornamentation, shape or configuration applicable to an article being features that, in the finished article, can be judged by the eye, but does not include a method or principle of construction. The owner of copyright in an artistic work may apply that work to an article (eg. a dinner plate) and then register that article as an industrial design. The owner of the artistic work has dual protection under copyright and design law.

In 1989 the government acted to limit the design/copyright overlap by amending the Copyright Act. The amendments were intended to remove copyright protection for essentially industrial products, and to eliminate any uncertainty and inequity caused by the overlap. The overlap provisions currently operate as follows:

- two-dimensional designs continue to receive copyright protection as artistic works under the Copyright Act when applied as surface designs to articles, to the extent that those design features reproduce the artistic works. If the design is also registered under the Designs Act then dual protection is given.
- the copyright in a two-dimensional artistic work continues to be infringed by a two-dimensional copy of that work made in the course of industrial application, that is, ‘plan-to-plan copying’.
- three-dimensional articles retain copyright protection only if they are works of artistic craftsmanship or buildings or models of buildings. Copyright protection is lost if these items are registered as designs.
- in other cases, copyright protection for artistic works applied as three-dimensional designs is effectively forfeited if the corresponding design is commercially produced.

As part of its decision to revamp the industrial design registration system (see section 4.5.1), the government announced further changes to improve the operation of provisions in the Copyright Act on overlap between industrial design and copyright.

Patents and copyright

Computer programs are protected under the Copyright Act as literary works. Some computer programs also meet the test for patentability and are able to be patented, which provides broader protection than copyright. IP Australia considers that the possibility of dual protection

of software can be maintained, in the absence of any internationally accepted system of generic protection.

Trade marks, business names and domain names

There is also significant overlap between trade marks and business names, with many firms choosing to use the same or similar names to identify their product and their business. Recent moves to advertise and market on the internet have led to a similar overlap with domain names, as firms seek to use a domain name that is easily identified with their firms and its products. At a recent conference on Business Names, held in Canberra on 1 October 1999, concerns were expressed that there is a lack of understanding of the differences between the Business Name registration system and the trade mark registration system. It was suggested that this problem will be exacerbated as more traders use their names as trade marks and domain names on the internet.

Business names are registered on a state basis, while domain names and trade marks are registered nationally. Identical business names can be registered to different owners in different states. But only one of these owners can register the name as a trade mark if the goods or services in which they trade are the same or are closely related. Registration of a business name can lead an owner to wrongly assume an automatic entitlement to register the business name as a domain name. There is also an expectation that registration of either of these will automatically entitle them to exclusive rights in the name when they come to register it as a trade mark. Conflict also occurs between trade mark and domain name rights in instances of 'cybersquatting' and 'reverse hijacking'. Cybersquatting involves the registration of usually famous trade marks as domain names for the purpose of selling them back to the trade mark owner. Reverse hijacking involves owners of trade marks taking infringement action against owners of similar domain name registrations.

In the case of small business, the owners of similar business names can often coexist amicably because their businesses operate within separate geographical areas - they may not even be aware of each other's existence. However, when one of them registers their name as a domain name, the global coverage of the internet ensures that they occupy the same market and become competitors for the same consumers. Thus, domain names can give rise to infringement that would otherwise have not occurred, increasing the likelihood of litigation with all its accompanying costs.

Jurisdictional issues can also extend to the international scene. Use of a domain name is global. If an Australian firm conducts overseas trade via the internet, consumers in other countries can be exposed to Australian registered business names, domain names and trade marks. If these name and trade marks are registered trade marks in other countries, then infringement can also occur.

Each of these examples further highlights the fact that markets perceive the domain name, business name and trade mark as intellectual property and consider it desirable to secure and own rights in each of the three areas. The conference on Business Names acknowledged that addressing the problem might have to involve harmonising the various state business names legislation with a single national Act to be administered by State agencies, or adopting a single national business names register. At present, IP Australia offers a trade mark search service for potential business name registrants to help overcome this issue. The service is widely advertised in the State business name registries.

Plant breeder's rights and patents

Some overlap occurs between plant breeder's rights and patents. Plant breeder's rights allow new varieties of plant, fungal, algal species and transgenic plants to be protected. Further, new plants and processes for obtaining them may also be protected by patents, where they meet the criteria of novelty, lack of obviousness and manner of manufacture.

Patents and designs

The ALRC's report on Designs²⁵ considered the overlap that exists between patents and designs, due to the possibility of registering design features that serve a functional purpose. After some discussion, the report recommended that new and distinctive visual features of a product should be able to be protected as a design, regardless of whether those features serve a functional purpose. This was accepted by the government.

4.5.3 The adequacy of the patents system in covering new technologies and for emerging industries

Over the history of the patents system, there have always been emerging technologies. Examples include the internal combustion engine in the 1900s; antibiotics in the 30s; radar in the 50s; lasers in the 60s and so on. Indeed, all modern technology originates from what was at some stage an 'emerging technology'. The objectives of the patents system are to encourage these new technologies to develop and mature by providing an incentive to innovate, and to enable the knowledge to become public.

Currently the most significant areas of emerging technology are biotechnology, computer software, and business systems. Critics have argued that the amount of protection provided is too broad (biotechnology) or the wrong kind (computer software). Others see these issues as transitory, reflecting the immaturity of those technologies currently being developed. The related issue of standards can be an important factor influencing competition for interface technologies, where different elements need to be compatible with each other²⁶.

As in the past, the future will give rise to new 'emerging technologies' in areas that can only be speculated upon. As in the past, the intellectual property system will have to handle all such emerging technologies - whatever they may be.

Because there have been and will always be emerging technologies and issues, it is important that the intellectual property system has the flexibility to deal with these. For the patent system, the current test for patentable subject material of requiring a 'manner of manufacture' has provided this flexibility. The concepts and criteria have remained the same, but the interpretation of these has been revised to deal with new situations. Essentially the test has been whether the product or process leads to an artificially-created state of affairs, and whether its significance is economic.

²⁵ Australian Law Reform Commission 1995, Report no. 74, *Designs*.

²⁶ This is discussed in Webster & Packer (ed) 1996, *Innovation and the Intellectual Property System*, Kluwer Law International Ltd. For example, in the case of information and communications technologies (ICTs) industries, standards are a vital prerequisite for technological advance. Recent high profile cases include political disagreements over high definition television (HDTV) formats and industry squabbles over the choice of the next generation of digital video disc technology. How are new industries' need for standards reconciled with the a company's IP rights, where that company's technology provided the basis for the standards?

This approach is more flexible than that taken in Europe. The European system uses statutory exclusions to define what is not patentable. This situation leads to people working around the exclusions, and obtaining a sort of *de facto* protection for some of these items. Because of this, there is now pressure in Europe to delete some of the exclusions.

It should not be overlooked that the test for patentable subject matter is not the only test for patentability. Other requirements have to be met, the major one being inventive step. Therefore, while the content of patentable subject matter may change with time, these other requirements may prevent certain products and processes from being patented.

4.5.4 The length and threshold of intellectual property protection

Patents and Designs

Length

TRIPS set the standard patent term to at least 20 years. In order to join the WTO including TRIPS, Australia amended its patent law to increase the standard patent term from 16 to 20 years. Protection for pharmaceuticals was already able to be extended to 20 years, in recognition of the development time required before pharmaceuticals can be released on the market. Since then, further changes have been made so that pharmaceutical protection in Australia can be extended up to 25 years. This allows for an effective patent life (the time that the patent can be exploited on the market) of up to fifteen years. Biotechnology Australia has suggested that the possibility of a similar extension for biotechnology innovations could be investigated, given that they are also subject to regulatory approval.

Section 4.2 discusses the costs and benefits of varying the strength of intellectual property protection in Australia, including the patent term.

Regardless of whether or not Australia would benefit from a shorter patent term, it is unlikely that this could be achieved in the TRIPS environment. Before TRIPS, most countries had 20 year terms. It would therefore be very difficult for Australia to convince other member countries to move to a shorter term, if this was desired.

Height

The height of intellectual property protection relates to the standard of innovation required to obtain a valid right. In the case of patents, this involves three criteria: novelty, lack of obviousness and manner of manufacture.

In recent years, concerns have been expressed²⁷ that the Australian patent system may provide a lower standard of patentability than major intellectual property exporting countries, for example the United States and Europe. This would be a concern to Australians, because it would mean that Australia offers patent protection more readily to foreigners, than that available to Australians in other countries. This could lead to reduced opportunities to Australian firms and increased prices for Australian consumers who use imported technologies, without any offsetting benefit overseas for Australian inventors.

²⁷ See ACIP's report on enforcement: Advisory Council on Industrial Property 1999, *Review of Enforcement of Industrial Property Rights*.

When comparing the patentability standards between Australia, and the United States and Europe, there are a number of differences in the law which may lead to a lower standard of patentability. For novelty, the United States uses additional references to demonstrate the meaning of a term or to show that an inherent characteristic of the invention is taught by the primary reference. In Australia, such extraneous material must be demonstrated to be common general knowledge at the publication date of the primary reference. In the case of the obviousness criterion, the test applied in Australia may be more lenient than in the United States. This is because in Australia, a new combination of known items may not be considered to be obvious, if the known items came from very different fields of technology.

Another significant factor is the standard of proof required to maintain an objection to the grant of a patent at the examination stage in Australia. The Commissioner may refuse to accept an application only if there is a lawful ground of objection, effectively creating a standard of proof of 'beyond reasonable doubt' before an objection can be maintained. The Australian approach differs from that in the United States and the United Kingdom, where the onus is placed on the applicant to argue the case when faced with a reasonable challenge.

Breadth

Concerns have been expressed about patents in new and emerging areas of technology, particularly in biotechnology. Early patents granted in these fields tended to have broad claims. There was a fear that these claims could potentially tie up research fields, and provide an undue market share to the patentee. Similar concerns have also been expressed in other countries.

A well established principle, over the history of industrial property, has been that the first into the field should be entitled to broad coverage. The question is, should that continue?

In Australia, the same criteria are applied for all patent applications, irrespective of technology. The inventive step criterion has to be determined in the light of what is obvious at the time the patent application was made.

Because of the rapid speed of their development, today's emerging technologies have brought a new dimension to this issue. Within a very short period, inventive and groundbreaking products and processes have become common place; this is now happening within the time span of a generation. Consequently, there is a perception, based on today's experience and mindset, that the patents granted for some of these inventions were too broad. This is in contrast to the past, when the maturity time for a technology may have spanned several generations.

Some of the patents receiving the most criticism were granted under the *Patents Act 1952*. With the introduction of the *Patents Act 1990*, patent examiners now have extra grounds to object to a patent being accepted. Thus, if the earlier applications had been examined under the current legislation, patents might not have been granted.

While there has been public concern, IP Australia's records show that the number of challenges to patents in these emerging technologies is in a similar proportion to those in other technical fields.

Grace periods

In tertiary institutions there is often conflict between the need for researchers to publish their work and the need to keep this secret prior to seeking protection. Also at the time, the commercial potential may not be apparent or realised. Potential commercial partners may want to test the market or evaluate the intellectual property before developing a product and seeking protection for it.

To some extent this issue is addressed through the provisional application system in Australia. This allows an applicant twelve months from filing a provisional application to further develop their invention and assess its commercial potential before making a complete application. The complete application will be the basis for any subsequent granted patent.

It has been suggested that a 'grace period' should be introduced, to allow a patent application to be made after the initial publication, without loss of rights because of that publication. This would be similar to the current arrangements that relate to exhibiting inventions and designs at officially recognised exhibitions.

A grace period would only be useful within Australia and the United States, and it could be detrimental for applications in other countries, because most other countries have a 'first to file' regime. Thus, if information about the invention had already been published in one of those countries, a patent or registered design could not be granted there. The United States has a 'first to invent' regime, and thus a prior disclosure would not affect the granting of rights there.

International discussions have taken place on the introduction of grace periods throughout the world. These have not progressed far and this issue is seen as a potential trade-off for the United States giving up its 'first to invent' regime.

IPAC²⁸ considered this issue and concluded that it would have to be approached globally, as any unilateral approach could lead to loss of rights for Australians overseas. It considered that the provisional application procedure went some way to addressing the needs sought by a 'grace period'. The ALRC also considered the issue and concluded that a 'grace period' should not be introduced for designs. This is because of the uncertainty created about whether a published design will later be the subject of a registered design. Like IPAC, the ALRC acknowledged the need for manufacturers to test the market without losing novelty. They concluded that this need could be addressed in other ways²⁹.

We consider that the issue of grace periods is best pursued on the broader international front. Meanwhile the provisional application system for patents goes a substantial way in addressing the underlying needs. Similar comments can be made for designs.

²⁸ Industrial Property Advisory Committee 1984 (Stonier Committee), *Patents, Innovation and Competition in Australia*, Canberra Publishing and Printing, Canberra, page 51.

²⁹ Australian Law Reform Commission 1995, Report no. 74, *Designs*, pages 105-107.

Trade marks

Disclaimers

Disclaimers are provided for by section 74 of the *Trade Marks Act 1995*. They limit the exclusive rights given by registration to use and to authorise the use of a trade mark. In general terms the owner of a registered trade mark has the right to the exclusive use of the trade mark as a whole. Part of a registered trade mark may contain matter that for one reason or another is not adapted to distinguish and in which the owner has no separate exclusive rights.

Under the *Trade Marks Act 1955* ‘non-distinctive’ elements of trade marks were disclaimed (for example, elements that were descriptive of a characteristic of the goods and/or services, were common to the trade, or were geographic names or common surnames). The purpose of the disclaimer was to define and clarify the distinctive elements of a trade mark. Applicants were required to include disclaimers in cases where the Registrar of Trade Marks considered it necessary. However, the difficulties that were experienced in considering disclaimer requirements often led to quite protracted examination. The decision to abandon compulsory disclaimers was made because it was considered that the costs to IP Australia and trade mark owners outweighed the perceived benefits. Because of the problems of interpretation and the consequent lack of consistency in their application, any certainty provided by a disclaimer was reduced.

Under the current provisions any part or parts of a trade mark can be the subject of a disclaimer (whether descriptive or not), but they are voluntary only and have no effect on the examination of a trade mark.

Disclaimers serve as a convenient tool to distinguish between distinctive and non distinctive features of trade marks. However, since they are not featured when the trade mark is used, they do not directly benefit the consumer or other traders in the market place. Consequently, IP Australia does not believe that the added administrative cost associated with disclaimers outweighs the advantages.

The absence of a requirement for disclaimers has not been a major issue during preparation of the new Trade Marks Act or the post-implementation review.

Geographical indications and traditional expressions

TRIPS defines geographical indications as ‘indications which identify a good as originating in the territory of a member, or a region or locality of that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin’. Thus, GIs are not merely indications of the geographic source of a product, they also convey information about its nature and quality.

Under the terms of TRIPS, members must provide the means to prevent use of GIs which are misleading or constitute unfair competition in respect of any goods. Article 23 requires members to provide additional protection for GIs for wines and spirits. This prevents use of these GIs on goods not having the relevant origin, and is not conditional on the use being misleading or unfair.

The Australian Wine and Brandy Act 1980 affects Australian owners of trade marks by prohibiting the application of a registered GI to wine made from grapes that were not grown in the place identified by the GI. This includes any word or expression that so resembles a GI as to be likely to be mistaken for it.

Issues that have arisen in this area since the commencement of TRIPS include:

- the relationship between trade marks and GIs
- increasing pressure from some member States such as the European Union and India to extend the provisions of Article 23 to goods other than wine and spirits; for example, cheese, processed meats, rice, and so on
- proposals relating to a multilateral register for GIs.

The issue of the trade mark/GI overlap is addressed within TRIPS, and to a certain extent the ‘first-in-time, first-in-right’ principle is recognised and upheld by its provisions. However, the European Community/Australia Wine Agreement, concluded before TRIPS, allows the rights of trade mark owners, whether established before or after the declaration of a GI, to be supplanted by the GI.

Traditional expressions (TEs) are generic descriptions that have been traditionally used to describe certain products. For example, in the wine and spirit industry, the terms ‘dry’, ‘tawny’ and ‘vintage’ are TEs. Some TEs fall within the same category as GIs, and are therefore already recognised and protected by TRIPS. Australia’s view is that other TEs are not included under the present terms of TRIPS.

4.6 Effectiveness of intellectual property rights for Australians

4.6.1 Cost and quality of examination

In May 1999, IP Australia analysed the relative costs of filing a patent application in Australia compared with overseas offices. The study excluded associated attorney’s fees and translation costs, and concentrated on official fees and annuities. The fees were based on a system of 23 components for patents - the official fees for filing, examination and grant, and up to 23 annuity payments payable in each of the (up to) twenty years of the patent’s life. Of the twenty-three countries analysed, IP Australia was ranked seventh lowest in fees³⁰. It was considered that a better reflection of an average real-life patent would exclude the later year annuities. As a result, a ten-fee-component (official filing, examination and grant fees, and annuities paid only up to the seventh year) was compared between the countries. Australia ranked fourth-lowest out of 23 countries.

Twenty-two countries were surveyed for trademark fees and took into account fees for filing, registration and the first renewal in both single class applications and applications in three-classes. IP Australia was fifteenth lowest in single class applications and seventeenth lowest in three-class applications.

In 1998, IP Australia’s fees were significantly reduced by 22% with further simplification of the fee schedule. The recent audit by the Australian National Audit Office (ANAO), *IP Australia - Productivity and client service*, tabled in Parliament on 10 August 1999, notes that IP Australia is price competitive when compared to other intellectual property offices.

³⁰ See section 5.6.

IP Australia's whole of life fees are not significantly different from the United Kingdom and United States. The report also commented that the ease of accessibility to search materials and administrative data had improved, allowing clients greater access to the necessary resources before seeking patent protection. A major development was the availability of CD and home page access to relevant patent specifications. There were significant efficiency improvements, which have led to the processing of a large number of applications.

Some interest groups have raised concerns about whether the drive for efficiency gains and lowering costs has adversely affected the quality of IP Australia's examination and search work. IP Australia has been conscious of this and has endeavoured to ensure that any efficiency improvement has not been at the expense of quality. However the issue of quality of examination is a complex one and is one that many intellectual property offices around the world are trying to deal with. For example, recently the United States Patent and Trade Mark Office, the European Patent Office and the Japanese Patent Office have undertaken a project to compare their search results.

To meet IP Australia's objectives in issuing valid rights, consistent examination processes are required. After consultation with customers, quality standards for patent examination were documented in November 1998. These quality standards were devised to ensure that if they are met, the customer expectations will also be met and valid patents will result. Similar work has commenced in developing a framework for improving the consistency and quality of the examination process for trade mark and design applications. About two years ago, IP Australia instituted a team approach to developing search strategies employed for international patent searches. Comments from customers indicate that this process has had a marked effect on improving the quality of searches.

The ANAO did comment that IP Australia's standards focussed largely on its internal processes and did not appear to address fully the quality concerns from the customer's perspective. IP Australia has agreed with this and will undertake, as part of its continuing work on refining and developing its quality systems, to address this issue. This issue will also be addressed in benchmarking work that IP Australia is undertaking in conjunction with ACIP.

4.6.2 Enforcement

The extent to which the intellectual property system protects innovation and investment depends on how well such rights can be enforced. For enforcement to be effective it is important that the judicial system as far as practicable, should be cost effective, timely, accessible and predictable. Expensive, time-consuming or unfair dispute resolution mechanisms will undoubtedly discourage firms from using the intellectual property system.

In March 1999 ACIP reported to the Minister for Industry, Science and Resources on issues relating to the enforcement of industrial property rights. ACIP's report³¹ focussed on the enforcement of patent rights.

ACIP concluded that there is substantial uncertainty regarding the outcomes of enforcement action. This uncertainty is caused by a number of factors, including a low level of knowledge about what a patent right entails and how to manage intellectual property; a low presumption of validity of patents; the cost and time involved in taking enforcement action in the courts; the

³¹ Advisory Council on Industrial Property 1999, *Review of Enforcement of Industrial Property Rights*.

high degree of uncertainty of outcome in legal proceedings in patent matters; and the fear that parties with more resources can abuse the system and force an unfair outcome on smaller parties.

ACIP recommended a number of changes to the enforcement system, including:

- improved education and awareness programs for users and potential users of intellectual property
- an increased presumption of validity (this could include amending the *Patents Act 1990*)
- improved appeal mechanisms and procedures for review
- increasing the specialisation of intellectual property judges
- increased penalties for infringers
- introducing provisions relating to the importation of infringing goods.

The government is presently considering its response to ACIP's report.

Determining the full costs involved in legal proceedings is difficult due to the differences in legal fees charged in Australia and overseas. Therefore, IP Australia is unable to provide such information for the benefit of this review. However, we can give some indication of the length of time that such court proceedings could take from a dispute arising to a decision in the courts.

The 1997-98 statistics showed that:

- 52000 patent applications were lodged in Australia (via Australian and PCT routes), of which 7000 were provisional applications
- 11000 patents were granted
- approximately 137 oppositions were filed
- 110 hearing decisions were issued.

Every year, on average, about 25-50 applications would reach the Federal Court. In order to minimise extensive legal fees, the respective parties often settle a number of these cases out of court.

Two cases have reached the courts in recent years. *Advanced Building Systems Pty Ltd ('Advanced') v Ramset Fasteners (Aust) Pty Limited*, was recently decided by the High Court. Litigation between the parties commenced in June 1993. The Federal Court found that the patent was invalid. The case was then appealed to the High Court whose findings in 1998 confirmed the Federal Court's decision.

NV PhilipsGloeilampenfabrieken ('NV Philips') and Philips Lighting Pty Limited v Mirabella International Pty Limited is another case that went to the High Court. In the early 1980s, Mirabella imported lamps from China having a similar appearance to Philips' compact lamps, ('Philips' lamps'). In 1992, the single judge of the Federal Court found that the patent was invalid and should be revoked. The decision was appealed to the full court of the Federal Court and then to the High Court. The High Court's decision in 1995 agreed with the original findings.

The two cases cited above are just examples of how long court proceedings can take to be processed. Even with the extensive legal fees and time required to prosecute such cases, it

appears that for many large firms at least, the value of a patent right far outweighs the costs involved in prosecution.

These issues apply equally to trade marks, as well as patents. Following on from ACIP's report on the enforcement of patent rights, the Minister for Industry, Science and Resources has asked ACIP to report on the enforcement of trade mark rights.

In its submission to the NCC³², IP Australia summarised the importance of section 51(3) of the Trade Practices Act, for the operation of an effective intellectual property system that is compatible with the goals of competition. Section 51(3) refers to the assignment and licensing of intellectual property rights.

Creators of intellectual property rights may not have all of the resources necessary to commercialise their invention. They often seek others with resources in production and/or marketing to bring their product to the consumer so as to make a profit from their invention.

Assignment is the written transfer of the intellectual property to another person or company. The purchaser thereby acquires all of the original intellectual property rights. Licensing only gives the licensee permission to use the intellectual property, to try to make a profit after payment of a licensing fee or royalties to the licensor. The licence is often subject to terms and conditions and the intellectual property holder maintains ultimate control of the intellectual property.

As a result of its review, the NCC recommended a number of amendments to section 51(3) including:

- removing price protection and quantity restrictions and horizontal agreements
- extending the exemption to cover the rights granted under the *Plant Breeder's Rights Act 1994* consistent with the protection provided for patents, registered designs, copyright and electronic layout rights
- a reference to the *Trade Marks Act 1995* in particular having references to the registration of goods and services and to authorised users rather than registered users
- saving provisions for those licences and assignments entered into before the amendments.

The NCC also recommended that the Australian Competition and Consumer Commission (ACCC) formulate guidelines to assist industry about:

- when intellectual property licensing and assignment conditions might be exempted
- when intellectual property licenses and assignments might breach PART IV of the TPA
- when conduct in relation to intellectual property, that does not fall within the exemption and that is likely to breach Part IV of the TPA, might be authorised.

The NCC recommended that the ACCC aim to release the guidelines to precede or coincide with the date of effect of the amendments to section 51(3). Equivalent amendments should also occur to the Competition Codes in each State and Territory.

³² IP Australia 1998, *Submission to the National Competition Council's Review of sections 51(2) and 51(3) of the Trade Practices Act 1974*.

IP Australia believes that the amendments proposed by the NCC would encourage rather than deter innovation because they provide a balance between intellectual property rights law and trade practices law.

4.6.3 Intellectual property professionals

Intellectual property professionals act as an expert interface between the administration of intellectual property rights and the customer in a significant number of cases.

The regulatory regime for intellectual property professionals is covered by the patents legislation. The Director General of IP Australia registers patent and trade mark attorneys. The Professional Standards Board for patent and trade mark attorneys (PSB - a statutory body created under the patents legislation), administers the education regime, and elements of the discipline regime, for professional practice in patents, trade marks and designs. IP Australia also provides administrative support to the PSB.

In June 1996, the review of the regulatory regime for patent attorneys published its report. Chaired by Professor Brian Johns, an Associate Commissioner of the ACCC, the review considered professional regulation against the competition principles.

In response to the report, the government made significant changes to professional regulation in patents, trade marks and designs. The changes included:

- deregulation of practice before IP Australia in trade marks and designs, enabling any person, including those without qualifications, to prepare and lodge trade mark and design applications on behalf of others
- introduction of a voluntary profession of trade mark attorney for persons obtaining specialist trade marks qualifications
- maintaining compulsory regulation of the right to prepare patent specifications for clients
- providing easier access by transferring education to universities
- restructuring and refocussing the Professional Standards Board (PSB) around the role of accreditation
- more flexible business structures for patent attorney firms.

Regulation of the patent attorney profession was maintained because of the skill required to prepare patent applications, and the potential for significant losses (to applicants and the public in general) because of poor drafting. The new changes to the legislation came into effect on 27 January 1999.

4.7 *Improving the coordination of intellectual property policy and administration in Australia*

At least five portfolios share responsibility for intellectual property protection:

- ISR, through IP Australia, has responsibility for patents, trade marks and designs. Other areas of ISR have interests in the role of intellectual property in innovation and industry policy, including facilitating the development of intellectual property in Australia
- The Agriculture, Fisheries and Forestry portfolio (AFFA) has responsibility for plant breeders' rights and GIs as they relate to some specific primary produce sectors
- Attorney-General's (AGs) has responsibility for print copyright law and circuit layouts
- AGs and the Communications, Information Technology and the Arts portfolio (DOCITA) have responsibility for copyright policy

- The Department of Foreign Affairs and Trade (DFAT) deals with trade-related aspects of intellectual property including TRIPS.

These interests show the variety of areas and industry sectors that may use intellectual property protection in its various forms. The different forms of intellectual property protection have different client bases and this provided a rationale for the existing separation of responsibilities. Many firms are now using a more sophisticated approach to their use and management of intellectual property. Today, it is common for a single firm to use combinations of copyright, patents, trademarks and designs as part of their strategy to develop a competitive advantage.

A 1992 paper by the Law Council of Australia argued for the formation of an office of intellectual property, answerable to one minister. Since then, some areas of industry and academia have called for a more coherent intellectual property protection policy, and have suggested centralising the administration.

In summary, the main concerns raised with the present administration are:

- the lack of a single point of contact on intellectual property protection matters
- insufficient coordination between portfolios, reflected in the plethora of committees and other bodies that have a role in the formulation of intellectual property reform proposals
- inconsistency between different elements of intellectual property protection legislation
- insufficient consultation with industry on copyright matters.

Industry has argued that with responsibilities shared between different portfolios, creators of intellectual property may not know which agency they should approach. This is especially likely to be the case for small to medium enterprises, which do not always appreciate the distinctions between different forms of intellectual property protection and are not sure which form they should be using.

Unified websites and hotlines can provide a single point of contact to make it easier for industry to know which organisation they should approach for information and the provision of services. Such unified services can be provided even though intellectual property protection matters are handled by a number of agencies. Similarly, there could be better integration of promotional activities, which might also help firms to understand the value of intellectual property in a strategic sense. ISR intends to approach the other agencies involved in intellectual property in order to develop such unified services over the next twelve months.

However, copyright and circuit layout protection do not involve any registration process and in these cases there is no contact necessary between the organisation administering the legislation and the owner of the right. This differs from the rights administered by IP Australia and AFFA.

In addition, innovators often use the services of professional advisers because intellectual property issues are complex. These professionals provide information and advice on intellectual property and assist innovators to apply for industrial property rights. Professional advisers know which agency to contact in complex cases.

Other forms of registration are also used by firms, such as registration of business names and internet domain names. While these do not fall within Commonwealth responsibility, many firms would argue that a central intellectual property agency should also provide these

services. Thus, centralising only the more traditional forms of intellectual property protection may not resolve this issue.

Centralised intellectual property administration may lead to a more coordinated approach to policy development. The need for strong coordination in policy development is increasing, as the old distinctions between industrial property and copyright become less clear, and the commercial importance of copyright increases with developments in information and communication technology. Under a centralised system, it would also be easier to build expertise across all areas of intellectual property, making it easier to handle new issues such as traditional knowledge (which do not fit neatly in the current system), and to ensure that issues do not slip between the cracks. A centralised administration might also make it easier to provide comprehensive briefings and enable Australia to speak with one voice in international fora. However, a centralised intellectual property administrator would still need to be linked closely to other portfolios involved in policy development. If isolated from these portfolios, there would also be a danger of lessening contact with key drivers of the intellectual property system.

Irrespective of administrative arrangements, there will always be an overlap of responsibilities between government agencies and therefore a need for effective coordination. Any change to the existing arrangements would be likely to alter the dynamics of the policy development and operation, but it is difficult to quantify any significant gains or losses.

As well as placing intellectual property under a single portfolio there are other options for improving the operation of the system through more formal coordination mechanisms or cross-membership of advisory bodies.

5. Appendixes

5.1 *The intellectual property system*

Historical overview and theoretical rationale

Intellectual Property (IP) is a term used to describe the property of the mind or intellect. WIPO provides that intellectual property rights include rights relating to:

- literary, artistic and scientific works
- performances of performing artists, phonograms, and broadcasts
- inventions in all fields of human endeavour
- scientific discoveries
- industrial designs
- trade marks, services marks and commercial names and designations
- protection against unfair competition
- all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

Each of the different forms of intellectual property protection (detailed below) developed at different times in different countries. Copyright protection dates back to pre-1640 and gained specific legislative protection in the Act of 1709 (the ‘Act of Anne’). Similarly, patent ‘privileges’ were granted as far back as the 15th century. By the middle of the nineteenth century, however, a link between the different forms of intellectual property was made. At that stage, it was common to use two terms to define intellectual property rather than one: the term *intellectual property* being for the ‘higher’ forms of literary and artistic endeavour recognised by copyright; and the term *industrial property* being for the more prosaic world of commerce in which patents and trade marks operated. Today, many consider that these terms are interchangeable. However, Australia presently maintains separate administration and policy-making for *copyright* and for *industrial property*.

Copyright grants authors and other creators of literary and artistic works certain rights to authorise or prohibit certain uses of their works. The term copyright also covers the rights of performing artists in their performances, the rights of producers of phonograms in their phonograms, and the rights of broadcasting organisations in their radio and television broadcasts, known as neighbouring rights.

Industrial property protection embraces protection of patentable inventions, certain commercial interests by means of trade mark law and law on trade names, industrial designs, the repression of unfair competition, trade secrets, plant breeder’s rights, and GIs.

The fundamental difference between copyright and industrial property protection is that copyright protects the expression in material form of ideas or information (note that copyright does not protect the actual ideas or information), and industrial property protection protects the physical products and services produced from those ideas and information. Industrial property also includes the marks, names and designations which refer to such products and services, and which do not cause confusion or deception.

Central to the economic justification of an intellectual property system is that without the intellectual property right, too few resources would be invested in innovation. As well as the direct benefit of the innovation to consumer choice and production efficiency, the general pool of knowledge is increased by public disclosure. The cost/benefit trade-off was recognised by the English parliament as early as 1624 when patents were first given a limited exemption in The Statute of Monopolies which otherwise prohibited monopolies. It continues today with TRIPS, where signatories to the WTO are required to give statutory protection to intellectual property. Although intellectual property rights involve some costs, other ways of encouraging innovation, such as subsidising inputs through grants or tax concessions, are less satisfactory – they either involve indiscriminate subsidies of both winners and losers or involve trying to pick winners. Intellectual property rights reward success by an amount that is determined by the market.

It is necessary to have an intellectual property system because of externalities that exist in the market for information. As stated by Anderssen³³:

‘Information has quite different economic characteristics from other goods and services. It is because of these different characteristics that market forces, on their own, would not allocate sufficient resources to the production of legally protected forms of information.’

Whilst copyright rights do not prevent the same (or similar) piece of work being created independently by two or more creators, industrial property rights make such a distinction. It is important not to think of industrial property as a ‘monopoly’ in the everyday meaning of conferring absolute market dominance since there are normally alternative substitutes. Rather, it is a ‘temporary exclusive right’ to only part of the commercialisation process but a part that can be crucial to success by giving the necessary competitive edge. For example, studies show the initial creation of an idea accounts for less than 20% of the total cost and time for commercialisation, and that over 90% of innovations fail in the market place. By protecting these ideas industrial property rights are crucial for success but rarely by themselves confer market dominance. Almost all products and processes have substitutes that limit the market power of innovators.

The grant of intellectual property rights must be balanced against the interests of the public. As stated by Blakeney and McKeough³⁴, intellectual property law represents a compromise between a number of competing interests including:

- those of the creators, inventors or owners of intellectual property rights
- those of their competitors
- those of the community in respect of the potential creation of monopolies
- those of the public in respect of wishing to avoid being deceived
- those of the social and legal order of the country, which would be fatally injured if it would cease to encourage the spirit of invention and creation, and if it would permit unlawful competition and free use of the creative work of others.

³³ Anderssen, H. 1995, *The Economics of Intellectual Property*, Working Paper 104, Bureau of Industry Economics.

³⁴ Blakeney ML and McKeough J. 1987, *Intellectual Property - Commentary and Materials*; The Law Book Company Limited, New South Wales.

International framework

The current international environment is one in which intellectual property systems are becoming more simplified and harmonised. There is an increasing push for the granting of intellectual property rights at a regional or global level rather than at a national level. The increasing globalisation of trade and commerce will undoubtedly lead to greater emphasis being placed on international aspects of intellectual property rights protection.

Laws protecting intellectual property vary between countries as well as between different forms of intellectual property. For example, over 120 countries belong to one or both of the *Berne Convention for the Protection of Literary and Artistic Works* and the *Universal Copyright Convention*, the two major international copyright conventions, which provide reciprocal copyright rights in each member country. In contrast, while many countries are members of TRIPS, most of these countries have their own legislation for the protection of patentable material and, as such, do not offer reciprocal protection rights.

However, the PCT does enable patent applicants to seek registration simultaneously in a number of member countries by filing a single international application. This streamlines the process considerably for applicants, who previously had to file individual applications in each country where they required protection. Under the PCT, an applicant files one application and designates the countries they are interested in. One of the major patent offices carries out an international search to check for prior art and sends a report to the applicant. If the applicant requests, a preliminary examination can be conducted and a report, which gives a non-binding opinion about the registrability of the application, is issued. If the applicant wishes to proceed with the application after these reports are issued the application proceeds independently in each country and is examined according to national patent systems.

IP Australia is one of the offices conducting international searches and preliminary examination, along with the patent offices of Austria, China, Japan, the Russian Federation, Spain, Sweden, the United States of America and the European Patent Office.

TRIPS aims to reduce distortions and impediments to international trade, promote protection of intellectual property rights and ensure that enforcement of intellectual property rights does not impede legitimate trade. It obliges members to protect a wide range of intellectual property. TRIPS sets the minimum standards of protection to be provided by each member, however Members are free, but not obliged, to provide more extensive protection than is required by the Agreement. Members are also free to determine the means by which they will provide this protection in their own legal systems. The economic significance of intellectual property protection is reflected in TRIPS being a key element of the agreement establishing the WTO.

Apart from TRIPS, most of the international intellectual property agreements are administered solely or jointly by WIPO, a specialised agency of the United Nations. The objectives of WIPO are to promote the protection of intellectual property and to ensure administrative cooperation among the Unions established by Conventions on the Protection of Intellectual Property. Through member countries' contributions and its revenue from registration functions, WIPO has the resources to promote intellectual property protection on a much greater scale than the relatively small area of the WTO dealing with TRIPS. TRIPS was a major achievement in bringing together protection for most forms of intellectual property, carrying it to a wider range of countries and underpinning it with effective enforcement and dispute resolution.

However, there is still a very important role for WIPO to play. WIPO has resources that it can direct to provide legal and technical assistance to developing countries. In addition, it has the experience and expertise to develop new standards to meet the challenges of new technology.

Apart from TRIPS, the following conventions confer or regulate international protection for intellectual property rights³⁵:

- *Convention Establishing the World Intellectual Property Organization 1967

Copyright and neighbouring rights

- *Berne Convention for the Protection of Literary and Artistic Works 1886
- *Universal Copyright Convention 1952
- *International Convention for the protection of Performers, Producers of Phonograms and Broadcasting Organisations (Rome) 1961
- *Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms (Geneva) 1971
- *Convention relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite (Brussels) 1974
- Vienna Agreement for the Protection of Typefaces and their International Deposit 1973
- Washington Treaty on the Protection of Intellectual Property in Respect of Integrated Circuits 1989³⁶
- Madrid Convention on the Avoidance of Double Taxation of Copyright Royalties 1979
- Nairobi Treaty on the Protection of the Olympic Symbol 1981
- Treaty on the International Registration of Audiovisual Works (Geneva) 1989

Patents

- *Paris Convention for the Protection of Industrial Property 1883
- *Patent Cooperation Treaty 1970
- *Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure 1977
- *Strasbourg Agreement Concerning the International Patent Classification 1971.

Plant breeder's rights

- *International Convention for the Protection of New Varieties of Plants 1961 (UPOV).

Industrial Designs

- *Paris Convention for the Protection of Industrial Property 1883
- Hague Agreement Concerning the International Deposit of Industrial Designs 1925
- Locarno Agreement Establishing an International Classification for Industrial Designs 1968.

Trade marks and GIs

- *Paris Convention for the Protection of Industrial Property 1883
- Madrid Agreement Concerning the International Registration of Marks 1891
- *Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks 1957

³⁵ Australia is a party to the conventions marked with an asterisk (*).

³⁶ This is not yet in force.

- Lisbon Agreement for the Protection of Apellations of Origin and their International Registration 1958
- Vienna Agreement Establishing an International Classification of the Figurative Elements of Marks 1973
- *Trademark Registration Treaty 1973
- *Trademark Law Treaty 1994
- Protocol relating to the Madrid Agreement Concerning the International Registration of Marks 1989

National infrastructure

Australia has long had a well developed intellectual property system as exemplified in *The World Competitiveness Yearbook 1999*³⁷ by the Institute of Management and Development in Switzerland which rated Australia's patent and copyright protection third strongest in the world.

Summary of types of protection

Presently in the Australian intellectual property system, some rights gain protection automatically, others require examination and registration, and for some there is no specific legislation. The term of protection is similarly not uniform. These are outlined as follows:

Copyright:

Copyright provides protection for original literary, artistic, dramatic and musical works as well as sound and film recordings, software and databases. Rights in respect of these are automatically protected under the *Copyright Act 1968*. Protection generally lasts for 50 years after the death of the creator, although there are a number of exceptions to the 50 year rule.

Patents:

Patent rights relate to inventions that are novel and non-obvious. Under the *Patents Act 1990*, a patent must be obtained through an examination and registration process. The term of a standard patent is up to 20 years subject to payments of annual renewal fees (starting from the 5th year). Patents for pharmaceutical inventions may have their term extended up to 25 years.

Trade Marks:

Registered trade marks relate to a letter, number, word, phrase, sound, smell, shape, logo, picture, aspect of packaging or any combination of these applied to products or services. Trade mark rights under the *Trade Marks Act 1995* also require examination and registration. The term of a trade mark can continue indefinitely in successive ten-year renewal periods.

Designs:

Designs protect the appearance of articles arising from their shape, configuration, pattern or ornamentation. Industrial Design registration under the *Designs Act 1906* requires examination and can be extended to a maximum term of 16 years. Similarly, the *Olympic Insignia Protection Act 1987* provides protection for the Australian Olympic Federation Inc. in respect of designs incorporating the Olympic insignia. Olympic design registration requires examination and can be extended to a maximum term of 24 years.

³⁷ Garelli et al, *The World Competitiveness Yearbook 1999*, Institute for Management and Development, Lausanne.

Circuit Layout Rights:

Circuit layout rights under the *Circuit Layouts Act 1989* are obtained automatically for the copyright-style protection of the layout of integrated circuits and semiconductor chips. These rights last for up to 20 years.

Plant Breeder's Rights:

Plant breeder's rights protect new varieties of plants that are distinct, uniform and stable. Protection is provided, following examination and registration, for up to 25 years for trees or vines and up to 20 years for other species under the *Plant Breeder's Rights Act 1994* and, formerly, the *Plant Variety Rights Act 1987*.

Geographical Indications:

Australian GIs are presently limited to wine grape regions and subregions and are protected indefinitely under the *Australian Wine and Brandy Corporation Act 1980*. Whilst registration of GIs is required, an individual or an organisation cannot own an indication unless they acquire all of the land (at least 5 wine grape vineyards of at least 5 hectares each) within the definition.

Non-legislative forms of intellectual property rights, such as confidential information, trade secrets, and passing off (also known as 'common law trade marks') are protected under the *Trade Practices Act 1974*.

Confidential Information:

Confidential information, including trade secrets, commercially sensitive information, private confidences, government secrets and indeed any information that is not in the public domain, is usually protected by way of written confidentiality agreements which can be defended under common law. No registration is required and the period of protection is indefinite.

Passing Off:

Passing off is the tort which makes it unlawful under common law for a person to deceive a section of the public into identifying a person's business with that of another. It extends the protection available under trade marks law, without the need for registration and without time limits.

Unfair Competition:

In contrast to many European countries, unfair competition, as a tort, has not yet gained currency in Australia. This is because it is generally considered to be protected under other laws (as detailed above), and under the tort of passing off.

Company Names:

Company names are protected under the *Australian Securities and Investments Commission Act 1989* by renewable registration with the Australian Securities and Investments Commission (ASIC). Protection is provided in as much as ASIC will not register a name identical to one which is already in use or reserved.

Business Names:

Similar to company names, business names do not provide proprietary rights and are renewable indefinitely by registration. Registration of a business name, being a name under which a firm operates, is compulsory in every state and territory from which the firm operates.

Internet Domain Names:

Internet Names Australia (INA), a division of Melbourne Information Technologies Australia Pty Ltd, sell internet domain name registrations which is renewable every two years. Whilst internet domain names are not protected by specific legislation, INA searches company name, business name and trade mark data bases before registration.

Parties with an interest in intellectual property

Nationally, Australia has numerous individuals, groups and organisations with strong intellectual property involvement. In the government sphere, AGs administers the *Copyright Act 1968* and the *Circuit Layouts Act 1989*. DOCITA has a key role in the formulation of copyright policy. ISR also has a close interest in copyright matters, particularly as these affect industry policy. In addition, ISR has prime carriage of patents, trade marks and designs, through its division, IP Australia. IP Australia administers the *Patents Act 1990*, the *Trade Marks Act 1995*, the *Designs Act 1906*, the *Olympic Insignia Protection Act 1987* and the *Sydney 2000 Games (Indicia and Images) Protection Act 1996*. The Plant Breeder's Rights Office of AFFA administers the *Plant Breeder's Rights Act 1994* (formerly the *Plant Variety Rights Act 1987*). In addition, AFFA administers the *Australian Wine and Brandy Corporation Act 1980* as it pertains to GIs.

Other Federal departments and agencies with strong involvement in intellectual property are: DFAT, which has its own intellectual property unit concerned with trade negotiations on these matters, the Treasury, the Department of Defence, the Department of Education, Training and Youth Affairs (DETYA), the Aboriginal and Torres Strait Islanders Commission (ATSIC), and for the administration of Company Names, the independent government body of ASIC.

A number of other statutory bodies with a direct involvement in intellectual property include: the Australian Broadcasting Commission, the Special Broadcasting Services Corporation, the Australian Competition and Consumers Commission, the National Library and the Australian Film Corporation.

ACIP was established in June 1994, and advises the Minister for Industry, Science and Resources and IP Australia on matters relating to the strategic administration of IP Australia and on industrial property policy. It comprises up to 11 members drawn from industry, academia and legal/attorney professions. Similarly, the Copyright Law Review Committee (CLRC) provides advice to the Attorney-General on copyright matters.

Non-government interest groups involved include:

- The Institute of Patent and Trade Mark Attorneys of Australia (IPTA)
- the Licensing Executives Society of Australia and New Zealand (LES)
- The Australian Manufacturers Patents, Industrial Designs, Copyright and Trade Mark Association (AMPICTA)
- The Australian Copyright Council
- Internet Names Australia (who administer internet domain names)
- International Federation of Industrial Property Attorneys (FICPI)
- the Institute of National Trade Mark Attorneys (INTA)
- the Asian Patent Attorney Association (APAA).

Also involved in intellectual property issues are: the patent and trade mark attorneys who draft and prosecute patent, trade mark and design applications on behalf of national and international clients; firms providing search services and support systems; the courts and intellectual property lawyers; the creators of intellectual property; and the users of intellectual property, the Australian public.

Related reviews and reports

Since its establishment, ACIP has undertaken a number of reviews and has issued the following reports:

- *Review of the Petty Patent System* - October 1995
- *IP Australia's International Strategy* - December 1998
- *Review of Enforcement of Industrial Property Rights* - March 1999.

The first of these reports recommended the introduction of an innovation patent system - a simpler, cheaper and easier way for small and medium enterprises to obtain intellectual property rights. The government accepted this recommendation, and legislation to enact it is currently being prepared.

The predecessor to ACIP, the Industrial Property Advisory Committee (IPAC), also conducted a number of reviews between November 1978 and March 1992 and published the following reports:

- *Report on proposed petty patents legislation* - November 1978
- *Report on amendment of regulation 7B of the Patent Regulations* - February 1979
- *The Trade Marks Act and importation of goods bearing a registered trade mark* - October 1980
- *Extensions of the convention period under the Patents Act* – January 1981
- *The economic implications of patents in Australia* – November 1981
- *Report on the registration of service marks under the Trade Marks Act 1955 and protection of company and business names* - December 1981
- *The economic effects of the Australian patent system* - April 1982
- *The commercial implications of the Australian patent system* - August 1982
- *Monash University Law School report to the Industrial Property Advisory Committee* - February 1983
- *Patents, innovation and competition in Australia* - August 1984
- *Report on the provisions of the Designs Act 1906 relating to infringement by articles imported from abroad* - March 1985
- *Patent information for smaller Australian enterprises* - August 1986
- *Qualifications for professional practice in trade mark matters* - December 1987
- *Legal protection of character merchandising in Australia* - March 1988
- *Practice and Procedures for enforcement of industrial property rights in Australia* - March 1992

Other reports relating to industrial property over the last few years include:

- ALRC report no. 74, *Designs (1995)*, tabled by the Attorney-General on 1 September 1995, which provides a key input for the development of a new registration system for industrial designs

- the report, *The Role of Intellectual Property in Innovation*³⁸, made to the Prime Minister's Science and Engineering Council in June 1993
- *Review of the regulatory regime for patent attorneys*, June 1996³⁹ to which the government responded by announcing a number of significant changes to the patent attorney profession, including deregulation of the trade mark and design sectors.

In the 1999 Budget, the government announced increased support for the biotechnology sector, including funding of \$17.5m for development of a comprehensive new biotechnology strategy, and more than \$250m committed annually to biotechnology R&D.

The government's industry policy statement, *Investing for Growth*, was released in December 1997. It contained a range of significant initiatives to encourage innovation, promote investment, develop Australia's export trade, maximise Australia's gains from the information age and further enhance our credentials as a world financial centre. *Investing for Growth* provided a whole-of-government response consistent with the priorities identified in the following reports:

- the report of the Review of Business Programs undertaken by Mr David Mortimer, *Going for Growth: Business Programs for Investment, Innovation and Export*⁴⁰. The Mortimer Report highlighted the importance of boosting business investment, encouraging innovation, expanding exports and ensuring the careful design and effective delivery of business programs.
- the report of the Information Industries Taskforce (IITF), chaired by Prof. Ashley Goldsworthy AO, *The Global Information Economy - The Way Ahead*; and the report of the Information Policy Advisory Council, chaired by Dr Terry Cutler, *A national policy framework for structural adjustment within the new Commonwealth of Information*. These reports focussed on establishing a framework for the development of the information economy, on widespread adoption of new technology and development of the information industries. Both emphasised that the Commonwealth should urgently address the issues raised by the rapidly changing information economy.

It is clear from statements by the government over the last few years that encouraging innovation continues to be a priority. In his 'Investing for Growth' address to the National Press Club, Canberra on 8 December 1997, the Prime Minister the Hon John Howard MP said:

'The policy statement I release today, Investing for Growth, adds important new dimensions to the policy framework that the Government has established since March 1996. At the heart of this statement is a range of significant initiatives to encourage innovation, promote investment, develop Australia's export trade, maximise Australia's gains from the information age and further enhance our credentials as a world financial centre. A strong, diversified, world-class business sector is crucial to Australia's future.'

³⁸ Prime Minister's Science and Engineering Council, June 1993, *The Role of Intellectual Property in Innovation*, Vols. 1 & 2, AGPS, Canberra.

³⁹ Johns, B. 1996, *Review of the Regulatory Regime for Patent Attorneys*, Department of Industry, Science & Technology, Canberra.

⁴⁰ Mortimer, D. et al 1997, (Mortimer Review), *Going for Growth: Business Programs for Investment, Innovation and Export*.

5.2 The role of ISR

ISR is responsible for issues affecting industry, business, science and technology, research, resources, sport, recreation, and tourism. ISR provides quality analysis and policy advice to the government on these issues, and delivers programs that aim to:

- improve national prosperity and well-being
- improve the competitiveness of Australian business
- foster excellence in Australian science and technology, and sport
- maximise the national benefits of research and innovation
- increase productive investment in Australia
- ensure our natural resources are managed sustainably
- expand market access for Australian business.

ISR is committed to lifting the long-term sustainable rate of Australia's economic growth and creating employment.

As a relatively small world economy, Australia faces particular challenges. In seeking to achieve higher and sustainable levels of growth, Australian firms must be able to respond positively to the challenges imposed by the globalisation of markets, advances in technology and a more open economy.

Australia's ability to respond to these challenges and take maximum advantage of emerging opportunities will be dependent on the extent to which Australian business can increase their competitiveness and their international orientation. Australian business must be innovative, adaptable and achieving world class levels of performance. Science and technology have a key role to play in increasing Australia's knowledge base and in fostering a culture of innovation. They are an integral part of all industrial activity and must be encouraged if Australia is to develop a prosperous knowledge-based economy.

ISR has a key role in increasing national prosperity by building the competitiveness of Australian business and fostering excellence in Australian science and technology. ISR also provides policy and legislative advice that contributes directly to government innovation policy.

Due to the varied nature of its responsibilities, ISR has a real role in both intellectual property and competition policy. ISR has a role in the following policy areas:

- Encouraging innovation within Australian industry.
- Promoting Australia's development as a knowledge-based economy, as well as facilitating the development of Australian intellectual property.
- Expanding overseas market access for Australian business.
- Regulatory policy issues that affect business including corporate law, trade practices and regulation reform issues. ISR provides the government with advice regarding the development of competition policy initiatives and non-sectoral microeconomic reform policies.

- Advice in relation to science, innovation, research and technology, including relevant science, technology and innovation programs. ISR supports Australian access to technology overseas; raises awareness of science and technology; and fosters international collaboration in science and technology, both through bilateral and multilateral arrangements with other countries.
- Policy advice on the sustainable development and internationalisation of Australian manufacturing, engineering and construction industries. This includes fostering the development and diffusion of advanced manufacturing and material technologies.
- Policy advice and implement initiatives to support the development of an internationally competitive environment management industry. ISR works with industry and other stakeholders to encourage the commercial uptake by industry of eco-efficient environmental technologies and management practices, develop markets for environmental goods and services, facilitate exports and advance relevant business networks.
- ISR advises government on and facilitates the development of an innovative and internationally competitive service industries sector in Australia and encourages growth in the overseas trade in services.
- with industry and other stakeholders to develop policies and strategies to support the development of world class internationally competitive industries.
- ISR, through its role in Biotechnology Australia, supports the development of internationally-competitive biotechnology industry sectors through policy development and programs for industry development in collaboration with industry and other stakeholders. Biotechnology Australia's tasks are to work closely with other Departments and stakeholders to: develop a national strategy to ensure Australia captures the benefits arising from the medical, agricultural and environmental application of biotechnology, while minimising costs and risks; develop a public awareness program to provide information about biotechnology and gene technology; support training for developers and managers of intellectual property; and secure better access to genetic resources and gene collections.

5.3 IP Australia's role

IP Australia's missions and functions

IP Australia is the Commonwealth agency responsible for granting rights in patents, trade marks and designs. As part of ISR, IP Australia provides policy and legislative advice on intellectual property that contributes directly to Australian government innovation policy.

From an international perspective, IP Australia is a medium sized intellectual property office. IP Australia receives about 52,000 patent applications, 29,000 trade mark applications nominating 44,000 classes and 4,000 design applications each year. The organisation has approximately 700 staff, of whom 200 are patent and design examiners and 80 are trade mark examiners.

IP Australia is a Receiving Office, International Searching Authority and International Preliminary Examining Authority under the PCT. It is a searching and examining authority for Singapore, New Zealand, Vietnam and other countries. Patent searches are also conducted for Thailand, Fiji and Singapore under bilateral arrangements.

IP Australia's mission is to ensure Australians benefit from the effective use of IP, particularly through increased innovation, investment and trade. To help Australians make the most of their IP, IP Australia has formed many strategic relationships. Some of the most important include:

- Professional bodies, such as the Institute of Patent and Trade Mark Attorneys. Through this relationship, IP Australia helps to ensure that thorough and effective legal advice is provided to Australian innovators.
- International organisations, such as WIPO. Relationships with bodies such as WIPO helps to ensure that the international intellectual property system meets the needs of Australians. It also ensures that procedures and processes in IP Australia are of a world class standard and harmonised with other nation's intellectual property systems.
- Other areas of Australian federal and state government responsible for intellectual property such as AGs and DFAT. Relationships with other departments ensure that IP Australia is aware of changes to legislation that affects other areas of intellectual property such as copyright, plant breeder's rights, circuit layout rights and business names. The Australian Customs Service also works in association with IP Australia, being responsible for the administration of trade mark legislation dealing with the importation of goods.
- Business groups such as the State Chambers of Commerce. IP Australia uses these relationships to ensure that business in Australia is kept informed about the value of their intellectual property.

Legislation administered

IP Australia administers the following legislation:

- *Patents Act 1990*
- *Designs Act 1906*
- *Trade Marks Act 1995*
- *Olympic Insignia Protection Act 1987*
- *Sydney 2000 Games (Indicia and Images) Protection Act 1996*
- *Scouts Association Act 1924.*

APPENDIX

In addition to granting patents, registering designs and trade marks, IP Australia also provides for the protection of words and images for Olympics' organisations and Scouts Australia.

5.4 Activity of selected intellectual property offices around the world

Office	Patents	Designs	Trade Marks	Copyright	Other
IP Australia	✓	✓	✓		IP Australia is part of the Department of Industry, Science and Resources
United States Patent and Trademark Office	✓	✓*	✓		The United States Patent and Trademark Office is part of the United States Department of Commerce *Designs are protected by means of a 'design patent'
United States Copyright Office				✓	The United States Copyright Office is part of the Library of Congress. Copyright owners may register their work through the office, although this is not a condition of copyright protection.
Japanese Patent Office	✓	✓	✓		The Japanese Patent Office is part of the Ministry of International Trade and Industry
Canadian Intellectual Property Office (CIPO)	✓	✓	✓	✓	CIPO is part of the government department known as Industry Canada. CIPO is also responsible for integrated circuits
United Kingdom Patent Office	✓	✓	✓	✓	The United Kingdom Patent Office is part of the Department of Trade and Industry
Intellectual Property Office of New Zealand	✓	✓	✓		The Office is part of the Ministry of Commerce
Department of Intellectual Property, Thailand	✓		✓	✓	The office is part of the Ministry of Commerce. Copyright owners may register their work through the office.
Korean Industrial Property Office	✓	✓	✓		
Intellectual Property Office of Singapore	✓	✓*	✓	✓**	The office is part of the Ministry of Law *Designs registered in the United Kingdom are protected in Singapore **The office provides information about copyright, but there is no formal registration process
Intellectual Property Division, Malaysia	✓	✓	✓	✓*	Part of the Ministry of Domestic Trade and Consumer Affairs. *The office provides information about copyright, but there is no formal registration process
National Board of Patents and Registration of Finland	✓	✓	✓		The Board also administers layout design of integrated circuits, and keeps a register of commerce and industry, containing information on roughly 450,000 Finnish businesses and organisations

Number of patent and trade marks applications and grants in selected intellectual property offices around the world

(WIPO 1997-Statistics)⁴¹

Patents

Country or Organisation	Number of Applications	Number of Grants
Australia	48 211	9 464
Canada	54 446	7 283
China	61 382	3 494
Denmark	109 061	12 103
Finland	109 437	2 315
France	112 631	50 448
Germany	175 595	55 053
New Zealand	35 137	3 823
Switzerland	112 852	18 083
United Kingdom	148 209	44 754
United States of America	236 692	111 984
European Patent Office	97 943	39 646

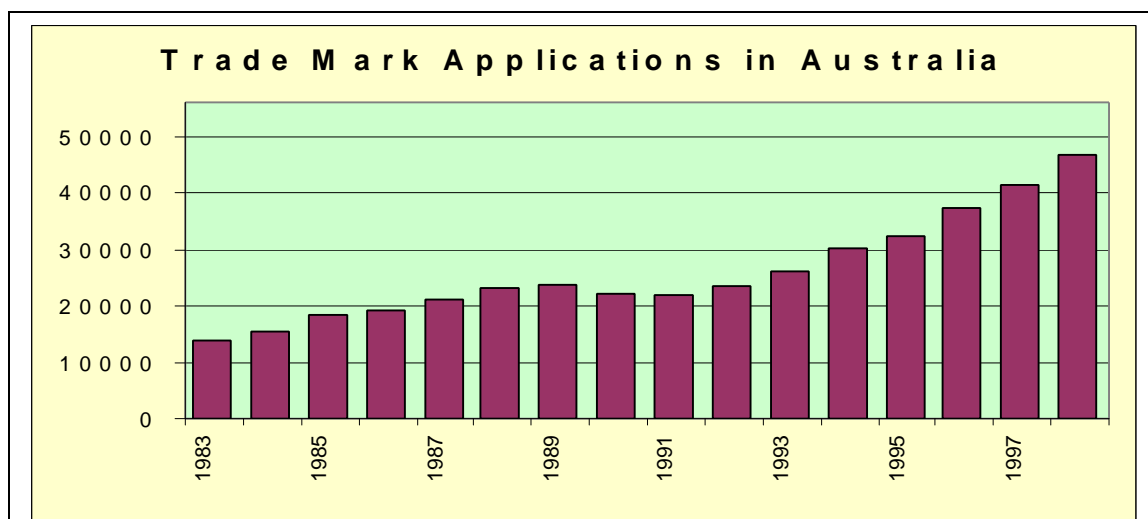
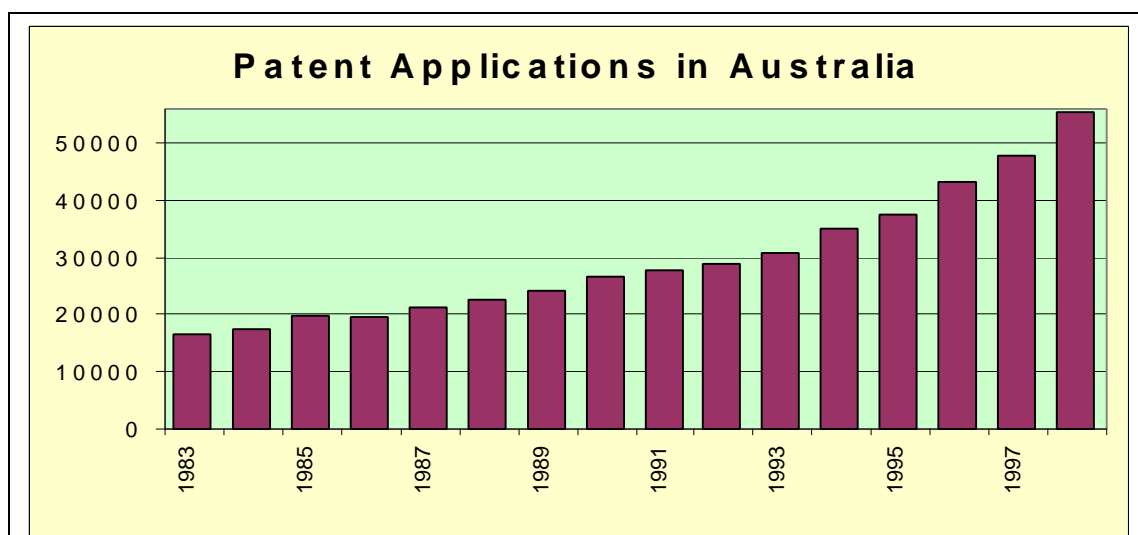
Trade Marks

Country or Organisation	Number of Applications	Number of Registrations
Australia	27 002	24 381
Canada	32 756	19 479
China	145 944	217 605*
Denmark	9 860	8 311
Finland	8 035	7 336
France	62 866	9 930
Germany	66 216	57 435
New Zealand	15 727	20 935*
Switzerland	21 685	23 288*
United Kingdom	64 169	49 035
United States of America	234 610	138 155

*These figures appear to have taken into account the 'backlog' of applications received by the Offices.

⁴¹ This was the most recent data available from WIPO.

5.5 Trends in the awareness and use of the intellectual property system in Australia



The above graphs show the growth in patent and trade mark applications since 1983.

A patent application is an indicator of marketing intent. A patent grant that follows the patent application is a weightier indicator. It follows that there is a long tradition of using patent data

to indicate innovative activity and technology development, particularly for international comparisons of technology growth and investment in innovation. Patent statistics provide at best a very partial measure, not least because many inventors do not take out patents and the propensity to patent can vary widely from industry to industry. Despite these problems, patent statistics can provide information that is not available anywhere else.

It is important to take care when analysing intellectual property statistics because of variations caused by a variety of factors. They are only indicators, not measures. At the most basic level, these data provide information on the number of intellectual property applications sought from within a country, or from other countries. This information provides a base from which to develop indicators of broader innovation and economic activities. However, it is important to recognise that the uncertainties of interpretation increase the further we move from this basic, factual level.

Numbers of applications will always be greater than the number of rights that intellectual property offices grant. There are several reasons for this. One is that intellectual property offices examine applications for rights against certain criteria. Only a proportion of applications will become grants or registered rights, as some will not meet the necessary criteria.

We also need to recognise that for commercial reasons, some applicants may not follow through all their applications to get a grant or registered right.

In the case of patent applications, the PCT and the European Patent Convention which came into force in the 1970s made it easier for applicants to seek rights in a number of different countries while delaying decisions on how far they would proceed. Applicants using these channels now have the opportunity to cover all bases 'just in case' more easily. Indeed PCT applicants have the option of ticking a single box to designate all PCT countries (currently 104). Many PCT applicants do choose this option. This very fact is clearly a component in the 'rapid acceleration' of intellectual property activity over recent years. Above, we noted that patent applications are an indicator of marketing intent. Clearly, there has been a PCT 'inflation effect' which has devalued application data as such an indicator. That would not matter if these factors had a uniform effect across all countries, and perhaps that is so for similar groups of countries.

Nevertheless, it is important to look at the story told by patent application statistics. And it is the increasing number of patent applications made by Australian residents in foreign countries (external applications) which indicate that Australians are making greater use of the intellectual property system. For example, in 1984, Australian residents made 6638 external applications, comprising 0.78% of total global patent applications. In 1994, Australian residents made 48510 external applications, comprising 2.02% of total global patent applications. This clearly shows that Australian residents are increasing their *use* of the intellectual property system (and at a faster rate than the average global resident), which itself is indicative of Australian awareness of the system.

Internal patent applications (ie, those made by residents in a country) are determined primarily by the level of local inventive activity, and can be used a broad indicator of the level of commercially directed R&D within the country. During the 1984–94 period described above during which there was a seven-fold increase in external applications by Australian residents, internal applications by Australian residents moved from 7170 to 9402, an increase of 31%.

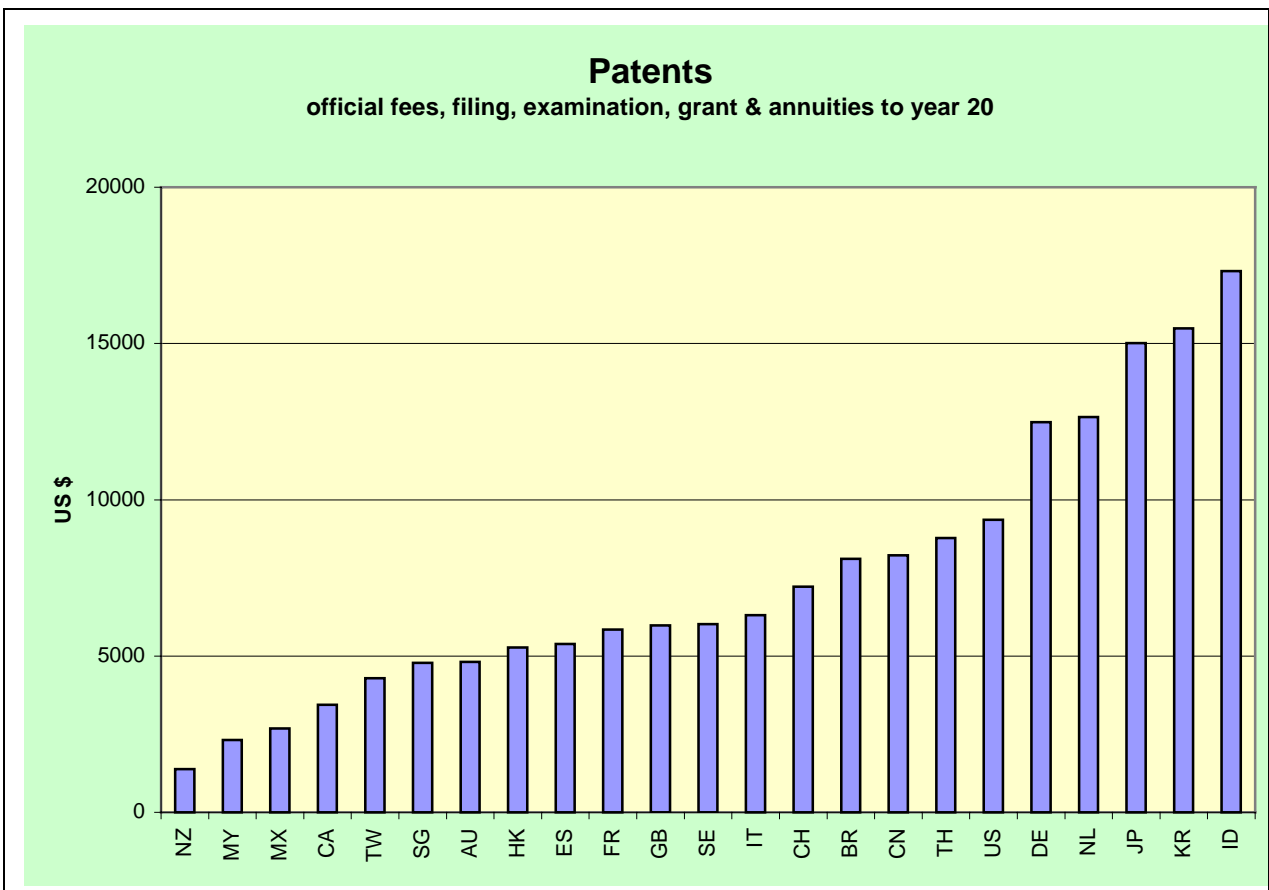
A 1997 report by the OECD⁴² examines the ratio of applications filed by non-residents to those filed by residents in a number of countries, between 1981 and 1994. Not surprisingly, the report found that in most countries the majority of applications are filed by non-residents, the only exceptions being Japan and the United States. The report also found that for most countries the ratio of non-resident to resident applications steadily increased between 1981 and 1994.

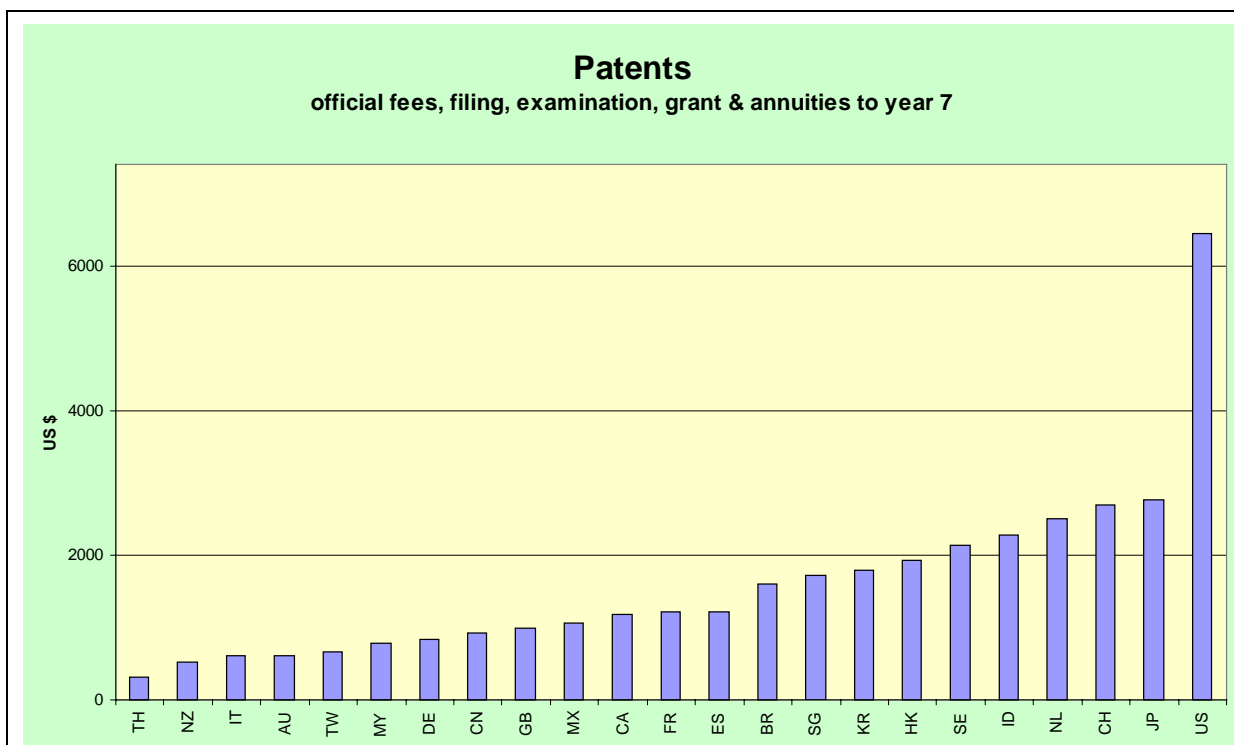
The ratio of applications filed by non-residents compared to residents in Australia reflects the above trend. The ratio for Australia increased from 1.85 in 1981 to 3.07 in 1994. It is interesting to note that for most of the period examined, only the United States, Germany and Japan had a lower ratio of non-resident to resident applications.

⁴² OECD, 1997, *Patents and innovation in the international context*, OCDE/GD(97)210, Paris.

5.6 Official fees in intellectual property offices around the world⁴³

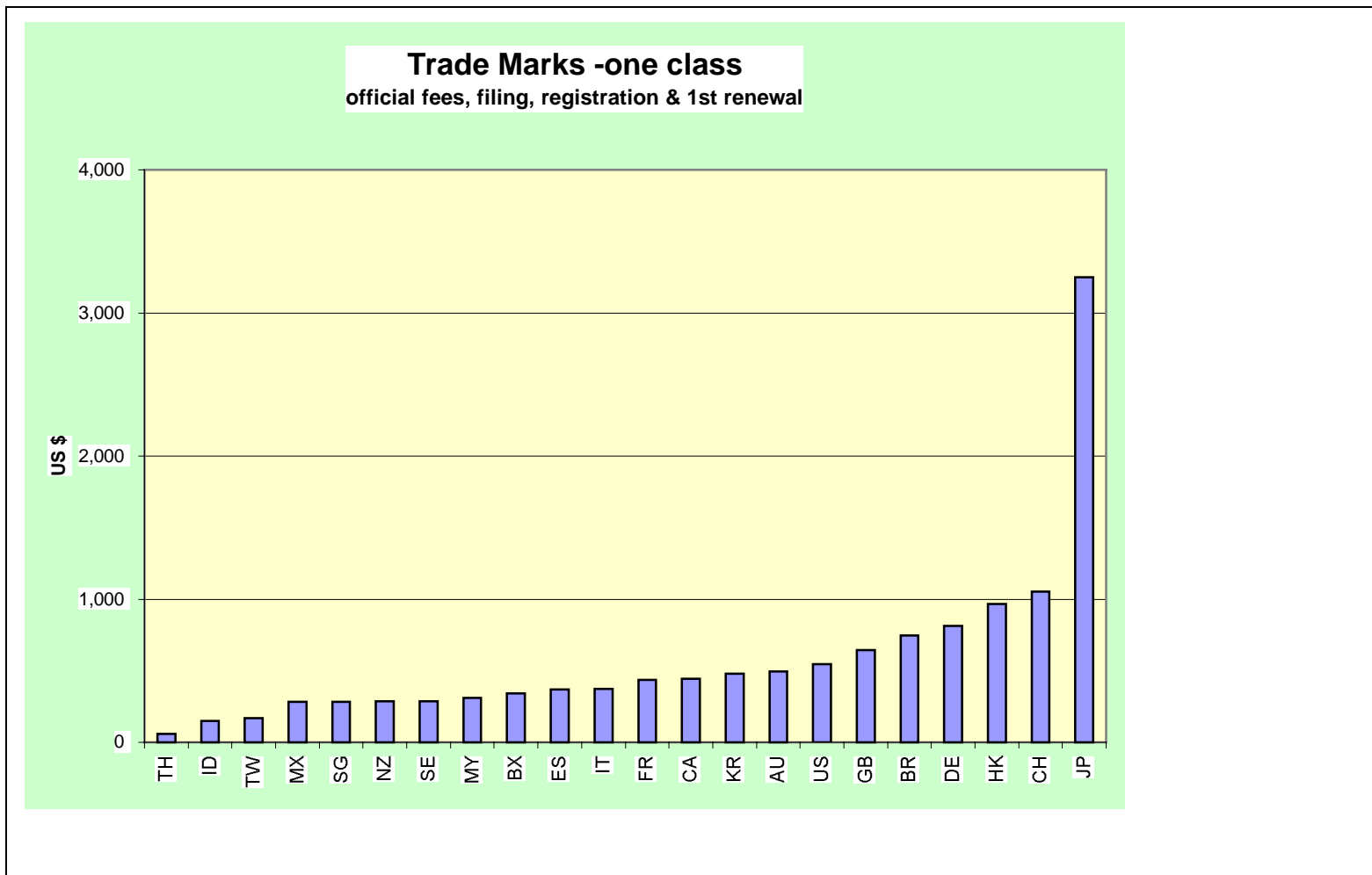
⁴³ From *Official fees in IP offices around the world*, May 1999, IP Australia. The key to the country codes is provided on the next

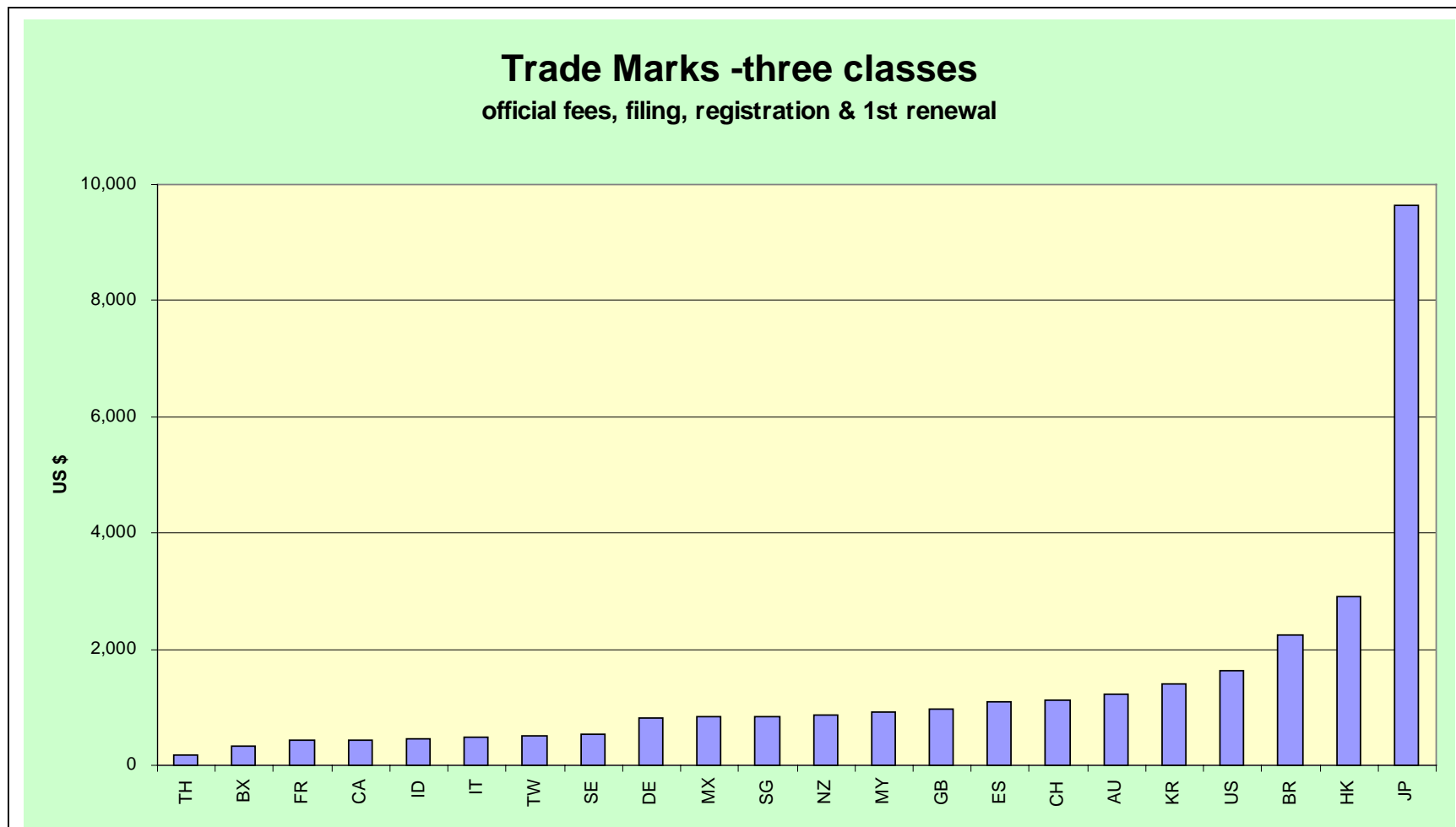




Key:

AU	Australia	GB	United Kingdom	NL	Netherlands
BR	Brazil	HK	Hong Kong	NZ	New Zealand
CA	Canada	ID	Indonesia	SE	Sweden
CH	Switzerland	IT	Italy	SG	Singapore
CN	China	JP	Japan	TH	Thailand
DE	Germany	KR	South Korea	TW	Taiwan
ES	Spain	MX	Mexico	US	United States
FR	France	MY	Malaysia		





6. Abbreviations

ACCC	Australian Competition and Consumer Commission
ACIP	Advisory Council on Industrial Property
AFFA	Commonwealth Department of Agriculture, Fisheries and Forestry
AGs	Commonwealth Attorney-General's Department
ALRC	Australian Law Reform Commission
ANAO	Australian National Audit Office
APEC	Asia-Pacific Economic Cooperation
ASIC	Australian Securities and Investments Commission
BIE	Bureau of Industry Economics
DFAT	Commonwealth Department of Foreign Affairs and Trade
DOCITA	Commonwealth Department of Communications, Information Technology and the Arts
GI	geographical indication
IP	intellectual property
IPAC	Industrial Property Advisory Committee
ISR	Commonwealth Department of Industry, Science and Resources
NCC	National Competition Council
OECD	Organisation for Economic Co-operation and Development
PCT	Patent Cooperation Treaty
PLT	Patent Law Treaty
R&D	research and development
TE	traditional expression
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

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