# 3 Key features of patents systems in Australia and comparable markets

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| Key points |
| * Under the *Patents Act 1990* (Cwlth), an invention is eligible for a patent if it meets patentability criteria, including that it is a ‘manner of manufacture’, is novel, involves an inventive step and is useful. * Australia and all comparable markets are signatories to key international intellectual property agreements, which condition patents systems. As a result, there are many similarities between patentability criteria, patent application processes and patent terms and conditions. * There have been many reforms of patents systems in Australia and comparable markets in recent years. Common themes include: raising the threshold for patentability; further harmonisation of patents systems; and cooperation and sharing of resources between patents offices. * Compulsory licensing provisions are a feature of patents systems in Australia and comparable markets. The specific grounds for a compulsory licence vary across countries, but typically include non-working of a patent, dependent patents, public interest and anticompetitive conduct. * As in Australia, compulsory licences are rarely granted in most countries. Among developed countries, compulsory licensing appears to have occurred most frequently in the United States, particularly to remedy anticompetitive conduct and patent infringement. The US Government has also invoked government use provisions to gain access to patented inventions for defence and other national security related purposes. |
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This chapter provides an overview of key features of patents systems in Australia and comparable markets. This includes mechanisms that allow non-voluntary access to patents, such as compulsory licensing. More detailed information on patents systems is provided in appendices B and C.

What constitutes a comparable market is a complex issue that depends on a range of factors, such as a country’s industrial structure, geography, form of government, human and physical capital, and the purpose of the analysis at hand. Like many other developed countries, the fact that Australia grants the majority of patents to non-residents is particularly relevant for this inquiry. For example, in 2010, 91 per cent of patents granted in New Zealand and 90 per cent in Canada were to non‑residents (WIPO 2012a). Australia’s status as a developed economy is also relevant, given the importance that places on attracting suppliers of advanced technologies. Hence, the United States is included in the comparison. Australia’s significant trading relationship with Asian countries, such as China, has been a further consideration.

## 3.1 Key features of patents systems

Patents systems in Australia and comparable markets are broadly similar. For example, comparable markets provide intellectual property (IP) protection, have patents legislation and have a patents office. These similarities are largely because comparable markets are typically signatories to key international IP agreements, such as the Agreement on Trade-Related Aspects of Intellectual Property Rights 1994 (TRIPS), and efforts have been made in recent years to further harmonise patents systems. Similarities are also due to the common genesis of many patents systems. For example, Australia’s patents system was influenced by the patents system in the United Kingdom and other countries.

The *Patents Act 1903* (Cwlth) established a national patents system in Australia. This Act was subsequently replaced by the *Patents Act 1952* (Cwlth) and most recently by the *Patents Act 1990* (Cwlth) (Patents Act). Under the current system, patents are granted by a statutory officer, the Commissioner of Patents, and IP Australia is the government agency with responsibility for administering the patents system. The Patents Act sets out the criteria for patentability of an invention. To be patentable, an invention must be a ‘manner of manufacture’, be novel, involve an inventive step and be useful. These requirements are discussed in more detail in appendix B.

In addition to patents, copyright and trademarks, Australia has a separate system of IP rights under the *Plant Breeder’s Rights Act 1994* (Cwlth) for new varieties of plants that are distinguishable, uniform and stable. This is beyond the terms of reference for this inquiry, and so is not discussed further in this chapter (chapter 2 contains a brief discussion).

There are two types of patents available in Australia — standard and innovation patents. The TRIPS agreement requires signatories to provide standard patent protection for a minimum of 20 years. Consistent with this requirement, standard patents have a maximum term of 20 years in Australia, except patents for pharmaceuticals, which can be granted a 5-year extension, taking the maximum term to 25 years. Standard patents in comparable markets also have a 20-year maximum term. Some comparable markets also allow extensions for pharmaceutical patents, including many members of the European Union, Japan, Korea and the United States. Extensions also exist for agricultural chemicals and veterinary products in some countries.

Innovation patents have a maximum term of eight years in Australia, and provide patent protection to inventions that do not meet the inventive threshold required for standard patents. These patents were introduced in 2001, and were intended to provide inventors with a relatively quick and inexpensive way to obtain patent protection for an incremental advance on existing technology, rather than a ground‑breaking invention.

In most comparable markets, inventions can be protected under a ‘utility model’, equivalent to innovation patents in Australia. Utility model patents have a maximum term of: 6 years in France; 10 years in Germany; 10–15 years in Japan; and 15 years in Korea. In these markets, like Australia’s innovation patents, utility model patents have less stringent requirements for patentability, lower fees and a more streamlined application process.

### Application process

#### Standard patents

In Australia, applications for a standard patent must disclose sufficient information, such that a person skilled in the relevant field could replicate the invention. Prior to submitting an application, an inventor may undertake a search to determine if a similar invention has been patented, which will affect the likelihood of a patent being granted. An inventor may also engage a patent attorney to represent them. Applications accepted by IP Australia are published in the *Australian Official Journal of Patents* 18 months after the date the application was filed. Once an application is published, third parties have three months to start ‘opposition proceedings’ and challenge the validity of the patent application.

Australia, like all comparable markets, has a ‘first-to-file’ system, where the right to the grant of a patent lies with the first person to file a patent application. Until recently the United States had a ‘first-to-invent’ system, but moved to a first-to-file system in March 2013 as part of changes made under the America Invents Act, which was passed into law in 2011.

Accepted applications are subject to mandatory examination (assessment against patentability criteria). Applicants must request examination within five years of filing an application. Within 12 months of requesting examination, IP Australia advises applicants whether their application meets the patentability requirements. Applicants can modify and resubmit their application. Once an application has passed examination and opposition proceedings have been resolved, a patent is granted. Annual renewal (maintenance) fees are payable from four years after grant and increase steeply over the term of the patent. A request for re-examination can be made once a patent is granted, subject to narrower grounds than for opposition proceedings.

Pre- or post-grant patent review provisions exist in most comparable markets. Opposition proceedings are available in some comparable markets subject to time limits, which are similar in Australia. However, they have been abolished in a number of countries. For example, in Japan, opposition proceedings were abolished in 2004 because they were considered redundant since patent invalidation proceedings were also available (Okuyama 2007). Other review procedures exist for challenging patents in comparable markets. For example, in the United States, a request for re‑examination of a patent can be made by anyone at any time during a patent’s term.

It is difficult to compare the cost of obtaining a patent in Australia with comparable markets because application processes differ, translation requirements might exist and fees are charged in the local currency. Costs change regularly, in part due to patents reforms, which also makes comparison more difficult. Park (2010) compared the costs of applying for a patent of specific complexity across countries. He found that it cost about US $20 000 to obtain a patent in Australia, which was about 50 per cent higher than in Germany and Japan, and between 10 and 20 per cent lower than in Canada, China, the United Kingdom and the United States. The mix of fees also varied, with the United States having the highest proportion of application fees and the lowest proportion of renewal fees.

#### Innovation patents

In contrast with a standard patent, innovation patents can be registered (or granted) without substantive examination. An innovation patent will be examined only if requested, as examination is not a requirement, unless the patent holder requires that the patent be enforceable. Examination of an innovation patent can only happen after it is granted (IP Australia nda). Some comparable markets with utility models, equivalent to innovation patents, have substantive examination requirements. The Advisory Council on Intellectual Property (ACIP 2011) is currently investigating the effectiveness of innovation patents.

In the past decade, applications for innovation patents in Australia have been stable, and small, relative to standard patents (less than 10 per cent). In contrast, utility model applications worldwide have grown rapidly in recent years. Applications received by the Chinese IP Office make up most of these applications (83 per cent in 2010). Worldwide, the proportion of utility model applications made by domestic applicants is higher than for standard patents. This is particularly the case in China where, in 2010, 99 per cent of applications were made by domestic applicants (WIPO 2012a).

#### International applications

Many Australian inventors apply for a patent overseas as well as in Australia. They do so because an Australian patent only provides protection in Australia. Patent owners have two options for an international application.

* Patent Cooperation Treaty application — this allows an applicant to file a patent application with IP Australia and opt for protection in over 100 countries.
* Paris Convention application — if protection is only sought in a few countries, it might be cost effective for an applicant to make separate patent applications in each country.

Foreign inventors can apply for a patent in Australia. In 2011, about 93 per cent of patents granted in Australia were to non-residents. Statistics on patents, including country of origin of patent grantees, are presented in chapter 4.

### Subject matter exclusions

Exclusions from patentability for particular types of subject matter exist in Australia and in comparable markets. Many are health related. Australia’s Patents Act states that ‘human beings, and the biological processes for their generation, are not patentable inventions’ (s. 18(2)). With respect to innovation patents, the Patents Act states that ‘plants and animals, and the biological processes for the generation of plants and animals, are not patentable inventions’ (s. 18(3)).[[1]](#footnote-1)

Most comparable markets have similar subject matter exclusions. Chapter 9 discusses health-related subject matter exclusions in more detail. Other typical subject matter exclusions in comparable markets include discoveries, scientific theories or mathematical methods, inventions contrary to public policy or morality, business methods and methods of medical treatment and diagnosis. Subject matter exclusions are discussed in more detail in appendix B.

### Patent strength and quality

In recent decades, a number of authors have compared the ‘strength’ or ‘quality’ of patents systems across countries (for example, Ginarte and Park 1997; Park 2008; Rapp and Rozek 1990; de Saint-Georges and van Pottelsberghe 2011; Tiwari 2012). Strength tends to relate to the degree of protection provided by patents, whereas quality relates to the rigour and transparency of the patent application process (a more detailed discussion of patent design is contained in chapter 2).

This literature has consistently found that developed countries have stronger patents systems than developing countries. Park (2008) and Tiwari (2012) both found that Australia had a strong patents system, but its system was not as strong as systems in some EU member countries, Japan and the United States. De Saint‑Georges and van Pottelsberghe (2011) examined the quality of patents systems in 32 mostly developed countries. Australia was ranked as medium‑low behind the European Patent Office, Japan and the United Kingdom but was ranked ahead of the United States. These rankings do not take account of recent reforms in Australia and comparable markets. Patent strength and quality is discussed in more detail in appendix B.

### Recent patents reforms

Australia, like most countries, has undertaken significant reforms to its patents system in recent years. The latest package of reforms in Australia — titled ‘Raising the Bar’ — led to extensive changes. A key rationale for these reforms was to raise the threshold for granting patents so that it is consistent with higher standards overseas. More specifically, the reforms aimed to raise standards by:

* requiring more information to be provided in patent applications and specifications, and that the patent has a credible use consistent with the information provided
* increasing the threshold for inventiveness, including by taking into account common general knowledge from overseas
* ensuring that a consistent standard of proof is applied by the Commissioner of Patents.

The compulsory licensing provisions were untouched by the ‘Raising the Bar’ reforms, and no significant changes have been foreshadowed at this stage. The ‘Raising the Bar’ reforms are discussed in more detail in appendix B.

Reforms in comparable markets have also been oriented to ‘raise the bar’. Other common themes of recent reforms include moves to harmonise patents systems and to increase cooperation and share resources between patents offices. For example, the five largest patents offices established a forum aimed at ‘the elimination of unnecessary duplication of work among the offices [and the] enhancement of patent examination efficiency and quality’ (Five IP Offices 2012).[[2]](#footnote-2) Key recent reforms in Australia and comparable markets are discussed in more detail in appendix B.

### International agreements

Australia is a party to several international agreements which, in addition to establishing patentability criteria, impose conditions on Australia’s right to authorise non-voluntary access to patents (including compulsory licences). These agreements can influence Australia’s patents system. The agreements most relevant to this inquiry are the Paris Convention for the Protection of Industrial Property 1883 (Paris Convention); the TRIPS Agreement; and the Australia–United States Free Trade Agreement (AUSFTA) (these agreements are further discussed in chapter 6 as they relate to compulsory licensing, and in appendix D in greater detail).

## 3.2 Non-voluntary access to patents

As mentioned in chapter 1, there are currently seven mechanisms in the Patents Act that allow a patented invention to be exploited without the patentee’s authorisation. Such mechanisms are essentially safeguards to be invoked in exceptional cases where the outcome associated with a patent would not serve the best interests of the community as a whole (chapter 2). This section provides an overview of the relevant mechanisms in Australia and their equivalents in comparable markets.

### Compulsory licensing

Sections 133–140 of the Patents Act allow a person to apply to the Federal Court for an order requiring a patentee to grant the applicant a non-exclusive licence to ‘work’ a patented invention.[[3]](#footnote-3) There are two grounds for the granting of a compulsory licence. An applicant must satisfy either a ‘reasonable requirements of the public’ test or demonstrate that certain offences under competition law have, or are going to, occur (chapter 6). Compensation must be provided to the patentee. This has to be an amount negotiated by the patentee and applicant, or an amount determined by the Federal Court as just and reasonable, having regard to the economic value of the licence and the desirability of discouraging anticompetitive behaviour (s. 133(5)). There appears to have only been three applications for a compulsory licence in Australia, and none were granted (chapter 1).

A third ground for compulsory licensing has been foreshadowed. In 2011, the Australian Government announced its intention to implement a TRIPS Protocol which will allow compulsory licensing for the purpose of exporting pharmaceuticals to developing countries (Carr and Emerson 2011). A draft of the Bill was released in August 2012. This mechanism is discussed in more detail in chapter 8. A number of comparable markets have already implemented the TRIPS Protocol, including Canada, which has issued one compulsory licence for the export of an AIDS drug to Rwanda. At the time of writing, no other country had issued such a compulsory licence.

Compulsory licensing provisions exist in almost all comparable markets, and have similar features to Australian provisions, in part because these countries, like Australia, are signatories to a number of international IP agreements. The US system stands in contrast to other systems, as it does not have compulsory licensing provisions in its patents legislation. However, provisions similar to compulsory licensing are contained in the Clean Air Act, Atomic Energy Act of 1954 and a number of other pieces of legislation. Compulsory licensing is also available to remedy antitrust violations and can be ordered in patent infringement cases.

Among comparable markets, despite its absence from patents legislation, compulsory licensing appears to have been used most frequently in the United States, particularly to remedy anticompetitive conduct, and more recently in patent infringement cases. Compulsory licensing in comparable markets is discussed in more detail in appendix C. Table 3.1 compares key features of compulsory licensing provisions in Australia and selected comparable markets.

Of the four grounds for compulsory licensing in patents legislation listed in table 3.1, all are contained in Australia’s Patents Act. Most countries allow at least one of these grounds for compulsory licences in their patents legislation (with the exception of the United States, as mentioned). While competition grounds for compulsory licensing exist in most comparable markets, the features of these provisions differ. For example, in Australia the Patents Act makes reference to breaches of the *Competition and Consumer Act 2010* (Cwlth). In contrast, US competition grounds are based on case law, rather than explicit provisions in either US patents or competition legislation. Among the countries listed in table 3.1, compulsory licences have been granted in the past decade in Canada, Malaysia and the United States.

Table 3.1 Features of compulsory licensing in patents systems in selected countries

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|  | Grounds for compulsory licensing in patents legislationa | | | | | Competition grounds for use of compulsory licensingb | Use of compulsory licensing in past decade |
|  | Non-working of patent | | Dependent patent | Patent abuse | Public interest |
|  | |  |  |  |  |  |  |
| Australia | | 🗸 | 🗸 | 🗸 | 🗸 | 🗸 | 🗴 |
| Canada | | 🗴 | 🗴 | 🗸 | 🗴 | 🗸 | 🗸 |
| China | | 🗸 | 🗸 | 🗸 | 🗸 | 🗸 | 🗴 |
| France | | 🗸 | 🗸 | 🗴 | 🗸 | 🗸 | 🗴 |
| Germany | | 🗸 | 🗸 | 🗴 | 🗸 | 🗸 | 🗴 |
| Japan | | 🗸 | 🗸 | 🗴 | 🗸 | 🗴 | 🗴 |
| Korea | | 🗸 | 🗸 | 🗸 | 🗸 | 🗴 | 🗴 |
| Malaysia | | 🗸 | 🗸 | 🗸 | 🗴 | 🗸 | 🗸 |
| New Zealand | | 🗸 | 🗴 | 🗴 | 🗴 | 🗴 | 🗴 |
| United Kingdom | | 🗸 | 🗸 | 🗸 | 🗸 | 🗸 | 🗴 |
| United States | | 🗴 | 🗴 | 🗴 | 🗴 | 🗸 | 🗸 |

a In this table, a cross means that the relevant ground is not *explicitly* provided for in patents legislation. b A competition ground for compulsory licensing might exist in patents or competition legislation or have its basis in case law.

*Sources*: WIPO (2010a), (2011b); national legislation.

### Government use and acquisition

The Crown use provisions of the Patents Act (ss. 163–170) provide for the Australian, State and/or Territory Governments, or a person or organisation authorised by them or their agencies, to use a patent with protection from legal action for patent infringement. Such use is only permissible where the use is for the services of the Australian, State and/or Territory Governments. If this provision is invoked, the patent holder is entitled to remuneration under s. 165 of the Act. If the parties do not agree to terms, the Federal Court can determine them. There are two reported cases in which Crown use has been contested in court (discussed in more detail in chapter 7).

Crown acquisition is also available to governments. In addition to the Commonwealth acquiring a patent from a willing seller on agreed terms, the Patents Act (s. 171) provides for the Governor-General to direct that a patent, or an invention that is the subject of a patent application, be acquired by the Commonwealth with all rights in respect of the patent or invention transferred to the Commonwealth. In this case, reflecting s. 51(xxxi) of the Australian Constitution, the Commonwealth must pay compensation to the patent holder on agreed terms or, in the absence of agreement, on terms determined by a prescribed court. While governments may have acquired patents on a voluntary basis, to the Commission’s knowledge they have never compulsory acquired a patent. Crown use and acquisition is discussed in more detail in chapter 7.

Government use provisions also exist in comparable markets. The provisions in Canada, New Zealand and the United Kingdom are most similar to Australia’s. It appears that most comparable markets have rarely invoked their government use provisions. A notable exception is the United States, which has relied on such provisions predominantly for defence and national security purposes (Reichman 2006).

### Research and regulatory approval exemptions

Two exemptions from patent infringement were clarified and strengthened in Australia’s Patents Act as part of the ‘Raising the Bar’ reforms.

* A regulatory approval exemption for activities undertaken for the purpose of obtaining information required for regulatory approval to market or manufacture a patented technology. The exemption applies to all regulated technologies with the exception of regulatory activities relating to pharmaceutical patents, which were already exempt (s. 119B).
* A research exemption for experimental activities that applies to all research activities where the predominant purpose of those activities is to gain new knowledge, or test a supposition or principle about the invention, or improve on or modify the invention (s. 119C) (IP Australia 2012b).

Unlike other parts of the ‘Raising the Bar’ reforms, these changes came into effect immediately after the legislation was passed. They aimed to address particular areas of concern for which compulsory licensing might have been used as a remedy.

Many comparable markets have research exemptions and almost all have regulatory approval exemptions. These are similar in nature to Australian exemptions. The Australian exemptions are discussed in more detail in chapter 8. Research and regulatory approval exemptions in comparable markets are discussed in more detail in appendix C.

### Other mechanisms

Australia’s Patents Act also allows use of a patented invention without the owner’s authorisation in cases of prior use and temporary presence.

The prior use exemption covers cases when exploitation of a product, method or process, or ‘definite steps’ (contractually or otherwise) to exploit, occurred immediately before the ‘priority date’ (filing date of the patent application) (s. 119). This exemption does not apply when exploitation of a patent had stopped or been abandoned. The prior use exemption ensures that the grant of a patent does not prevent parties other than the patentee continuing research and development activity already underway, and avoids researchers having to continually monitor the patents register to check that they are not infringing patents. Broad prior use exemptions exist in comparable markets. In the United States, the prior use exemption was recently expanded from business method patents to all patents, as part of the America Invents Act.

The temporary presence exemption covers use on board or in the construction of foreign vessels, aircraft or vehicles, temporarily or accidentally in Australia (s. 118). This exemption has its origins in nineteenth century English law, and is common in contemporary patents legislation around the world. The exemption was adopted by the United States and later internationally through the Paris Convention. Courts interpreting this exemption have found that it covers cases where a party is ‘entering for a period of time of finite duration with the sole purpose of engaging in international commerce’. There are arguments that this exemption is exploited by vessels choosing ‘flags of convenience’ to avoid patent infringement. There have been proposals to establish an international patent register to address this problem (Jonas Anderson 2008).

1. The exclusion for the purposes of an innovation patent does not apply if the invention is a microbiological process, or a product of such a process (Patents Act s. 18(3)). [↑](#footnote-ref-1)
2. The five largest patents offices are: European Patent Office; Japan Patent Office; Korean Intellectual Property Office; State Intellectual Property Office of the People’s Republic of China; and United States Patent and Trademark Office. [↑](#footnote-ref-2)
3. ‘Work’ means: to make or import a product, where the invention is a product; or to use the method or process to make or import a product, where the invention is a method or process. Parties can apply for a compulsory licence order only after three years have passed since the patent was granted (*Patents Regulations 1991*, r. 12.1). [↑](#footnote-ref-3)