Australian Government
Department of Industry, Science, Energy and Resources

Patents Accessibility Review

Final report

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Letter to the Minister

26 February 2021

The Hon Karen Andrews MP
Minister for Industry, Science and Technology
Parliament House
CANBERRA ACT 2600

Dear Minister Andrews

I have pleasure in attaching my report on the review on the accessibility of the patent system to small and medium enterprises (SMEs). The review follows the Terms of Reference (see 'Chapter 3: Final Terms of Reference') as laid down by the Parliament. It also raises a number of issues which emerged in the course of carrying out the review, as the terms of reference allowed for the inclusion of other relevant issues.

The principal issues on cost and processing times were easily dealt with, but the matter of education, awareness of intellectual property (IP) services, and the problems of complex litigation required some considerable research. The interviews carried out were rich in information on the experience of people within the SME sector: interviewees were frank and helpful.

This review report is also written in the light of the Australian Government's plan to create new businesses, and thus new employment opportunities, in certain IP intensive areas: namely the Modern Manufacturing Initiative.

Three main themes of this review report are:

- The **need for activism** on the part of government in seeking to assist small inventors with both commercialisation and patenting advice: these two are indissolubly linked and must be integrated. There are many who want assistance with both these matters but have difficulty in finding it. The report suggests direct action by a public-private partnership offering commercialisation and patenting advice, as well as coordinating the offer of funding (public and private) for critical technologies of national interest.
- The **fear of overwhelming litigation costs**, which turns people away from the patenting system. We should solve this if we are to have more participants in the IP rights system, and this is particularly important if we wish to encourage IP export, in which Australia is deficient.
- Export of IP: there is a problem here. The **internationalisation of Australian IP** – so that Australian SMEs are able to export their IP – is crucial. Becoming more familiar with accessing the IP rights system is critical in paving the way for this.

We have tried to keep faith with our respondents by referring to issues they raised, even if the suggestions were not taken up.

Throughout this process I have benefited greatly from the assistance of a team from the Department of Industry, Science, Energy and Resources (DISER) principally managed by Matt Lee and Brett Massey, from the extensive and well-informed support of IP Australia under the leadership of Michael Schwager, and in particular from the advice of Professor Andrew Christie of the University of Melbourne, whose comprehensive experience of the sector has been of invaluable assistance.

Yours sincerely,

Raoul Mortley, AO, FAHA
Emeritus Professor & Independent Reviewer

Abbreviations and acronyms

Please note that inserted comments in italics are verbatim quotations from our interviewees and respondents.

ACM Active Case Management

ADR Alternative Dispute Resolution

AI Artificial Intelligence

AMC Arbitration and Mediation Centre (WIPO – see below)

CMC Case Management Conference

CSIRO Commonwealth Scientific and Industrial Research Organisation

DISER Department of Industry, Science, Energy, and Resources

EMDG Export Market Development Grant

FCA Federal Court of Australia

FCC Federal Circuit Court

IP Intellectual Property

IPEC Intellectual Property Enterprise Court (UK)

PC Productivity Commission

PCC Patents County Court (UK)

PCT Patent Cooperation Treaty

SME Small to Medium Enterprise

RDTI Research and Development Tax Incentive

UKIPO United Kingdom Intellectual Property Office

VET Vocational Education and Training

WIPO World Intellectual Property Organization

Executive summary

1. On **costs**, there is no significant issue with government charges associated with patenting: in fact it was said that other countries are more expensive. Costs of professional services fees – those of patent attorneys or lawyers – do become a problem, and many professed to be surprised by the way in which these mounted up. These associated professional services fees do pose a barrier for a small business budget and are a cause of patent avoidance.
2. On **processing times** there is no significant issue, given that IP Australia can arrange for expedited review of a patent application at no extra cost, this taking three months. Some participants were quite happy for the delay of a year or so (this being the standard patent examination time under normal circumstances) – but there is no doubt that the availability of an expedited review service will deal with any problem here.
3. **Education and outreach** is a different matter in that – though the educational services provided by IP Australia are excellent – people involved in small business often did not seem to know about them or did not have any idea where to start on these issues, even having consulted them. For this reason, the Case Manager service now being trialled is an excellent initiative (even though it was subject to some criticism, as noted in the body of the text). It was seen to be important to settle this matter and move on. The Case Manager service is aligned with the activist *modus operandi* recommended by this report.

   Ignorance is difficult to measure, but it is probably a major factor in the lack of take-up of IP services.
4. Many respondents commented on the need to have a **patent strategy, but within** an overall commercial strategy, not to patent for patenting's sake. For this reason it has been emphasised that patenting advice should be housed within overall commercial mentoring and business strategy advice, not treated as a separate silo. No bifurcation of business strategy and IP strategy.
5. The emphasis in this report has been on an **activist approach**, encouraging the seeking out of inventors and inventions, rather than waiting until they approach government. The need for outreach is acute. The approach should be more like digging for gold, than watching the cricket.
6. **Export of IP**: this is neither a peripheral issue, nor a small issue. It arises directly out of our inquiries. We import most of our IP, whereas we have the ability to reverse this. With a technological innovation, going international will almost certainly mean involvement with the patenting system, even though some IT-based companies find methods of concealing their innovation. Avoidance of the patent system directly hampers our export capacity. This is a major gap, but it can be addressed.

7. Education and community awareness of IP can be increased through **media coverage** of inventions, especially given the new diversified media such as video streaming and podcasts, but not overlooking traditional broadcasting.
8. **Fear of litigation** is a major theme of this report. Changes are suggested which involve:
    a. a specialist IP court, with capped times and capped charges
    b. an arbitration system to be set up by IP Australia
    c. an expert opinion service at an affordable price for those who wish to seek expert advice on their position (with regard to another company infringing a patent, for example)
    d. a change to admissible grounds when there is an appeal against a decision made by the Commissioner of Patents.

    If there are known solutions that are inexpensive and timely, a lot of the uncertainty would be removed from the patent system.
9. There is a great deal of **hidden technology innovation**: people are often unaware that they have patentable inventions on their hands, and then are not able to quickly identify a source of advice. This applies to a whole range of industries, and in particular to universities, hospitals and clinical services – this being another reason for an activist or forensic approach in seeking out innovations of the patentable kind.
10. It is suggested that, for patents of national security and commercial importance, a public/private partnership (a **National Patent Defence Fund**) should be formed to seek out and fund inventions, even at the pre-patenting stage; offer mentoring and funding to ensure that inventions pass through to the commercialisation stage; and take a stake in such businesses.

Findings and recommendations

Findings

Finding 1:
IP Australia costs are not a significant obstacle to small to medium enterprises. Professional fees are in many cases unexpectedly high.

Finding 2:
The Australian Government's support for patenting and associated costs is adequate.

Finding 3:
The implementation of the legal and alternative dispute resolution steps advocated in this review may well lead to litigation insurance becoming a viable option.

Recommendations

Recommendation 1:
Focussing particularly on the export of intellectual property (IP) in the form of patents, that the Australian Government seek to collect and monitor data on small to medium enterprise (SME) use of the international IP system, and on the resulting revenue, comparing it with international SME use of the Australian IP system and its revenue.

Recommendation 2:
That processing times for the standard patent be continually monitored, and that the expedited examination be maintained as a priority.

Recommendation 3:
That the Department of Industry, Science, Energy and Resources partners with IP Australia in developing an integrated online training program which houses training in intellectual property management within an overall business strategy training course.

Recommendation 4:
That a list be developed of all technology-centred small to medium enterprises, including particularly new entrants, with a view to offering such an integrated intellectual property management/commercial strategy training course as an induction. Research and Development Tax Incentive registrations should provide a good starting point.

Recommendation 5:
That in developing such a list, there should be a twice-yearly review of new businesses created, with a view to offering a program (such as the above) as an induction for new technology-centred companies, and in order to alert them to IP Australia guidance tools. New businesses should be contacted early.

Recommendation 6:
That IP Australia and AusIndustry work together to reach groups and bodies associated with SMEs. AusIndustry should also explore opportunities to raise the profile of intellectual property with small to medium enterprises, particularly those developing within incubators.

Recommendation 7:
That IP Australia review and develop the Case Manager service and spell out the ways in which it operates. This should show how the service assists businesses, while also demonstrating that it conforms with section 185 of the *Patents Act 1990* and continues to provide opportunities for involvement by patent attorneys.

Recommendation 8:
That the Chair of Industry Innovation and Science Australia work with the Secretary of the Department of Industry, Science, Energy and Resources, and the Director General of IP Australia, to sound out media interest in regular program material, and consider further development of social media, streaming video and podcast platforms.

Recommendation 9:
That the intellectual property practice of the Federal Court of Australia be enabled to provide a stream for smaller disputes along the general lines of the Intellectual Property Enterprise Court of the UK, in order to provide at least one avenue for expedited and inexpensive trial processes. It is noted that IP Australia has agreed that it may be possible for it to facilitate funding for the new arrangements in accordance with the government's cost-recovery policy.

Recommendation 10:
That legislation be enacted such that if a party wishes to appeal a patent opposition, this appeal must be based on the facts and grounds originally available to the Commissioner of Patents, with new grounds being admitted only with the leave of the Court.

Recommendation 11:
That IP Australia set up and actively promote a non-binding expert opinion service, at a cost which is not prohibitive but consistent with its mission as a full cost-recovery agency.

Recommendation 12:
That IP Australia set up an arbitration service designed to settle patent disputes quickly and at low cost.

Recommendation 13:
That IP Australia seek to cooperate with the World Intellectual Property Organization (WIPO) in facilitating the possibility of WIPO arbitration in Australia for parties with transnational patent issues, or who seek an arbitration of known international standing.

Recommendation 14:
That IP Australia add to its model contract in the IP toolkit a recommendation that parties agree to a dispute resolution method, possibly including an option to adopt the IP Australia arbitration process or the World Intellectual Property Organisation arbitration process, should these two possibilities be established.

Recommendation 15:
That the Australian Government should investigate the possibility of setting up a national commercialisation and patent defence fund, with a view to seeking out and protecting Australian inventions deemed to be in the national interest – whether in terms of national security or commercial development – and seeing them through to a successful commercialisation.

Recommendation 16:
That the Australian Government use an opt-in, activist model in seeking out small business inventions which are in need of commercialisation and patenting advice.

1 Background and conduct of the review

This review is set in the context of the Productivity Commission (PC) Inquiry Report No. 78, September 2016, *Intellectual Property Arrangements*, and of government and public responses to the proposals made in that inquiry report. The Parliament legislated certain changes, including a requirement that certain issues be reviewed in the wake of these changes (see extract below).

The review process

Soundings were taken on these issues, firstly by a series of 55 oral consultations conducted by the team, predominantly with small to medium enterprises (SME) representatives involved in innovative companies, but also including specialists such as finance brokers, academic experts, commercialisation advisors, patent attorneys, solicitors and judges. These interviews provided the basis for developing a discussion paper containing certain focused questions. This paper was then publicised on the Department's website,[1] and also via email communication, and written submissions on these questions were invited. Twenty-two submissions were received and reviewed.

Throughout the review, expertise was sought from many sections of the Department of Industry, Science, Energy and Resources (DISER).

Desktop research was also undertaken, as indicated by the attached bibliography, which contains not only academic papers but also occasional lectures and social media commentary.

[1] Department of Industry, Science, Energy and Resources (DISER) (2020) *Patents Accessibility Review,* DISER website. https://consult.industry.gov.au/science-commercialisation/par/.

2 The issues

An extract from the relevant legislation highlights the questions which were of concern to the Senate.[2]

Review of the accessibility of patents

(1) The Minister must cause a review of the accessibility of patents for small and medium sized enterprises within 3 months of the commencement of this section.

(2) Without limiting the matters the review should consider, the persons conducting the review must examine:

(a) the cost of applications for patents; and

(b) processing times of patents; and

(c) advice provided by the Australian Government with respect to the patent application process; and

(d) awareness of the patent application process.

(3) The persons conducting the review must provide the Minister with a written report of the review within 12 months of the commencement of the review.

(4) The Minister must cause copies of the report to be tabled in each House of the Parliament within 15 sitting days of that House after the report is given to the Minister.

It should be noted that the legislation did not limit the range of enquiry; that the relevant Minister, the Hon Karen Andrews MP, agreed to the addition of the issue of enforcement and intellectual property (IP) litigation generally; and that this issue proved to be a problem of central importance.

The final Terms of Reference are presented in 'Chapter 3: Final Terms of Reference'.

[2] *Intellectual Property Laws Amendment (Productivity Commission Response Part 2 and Other Measures) Act 2020*, s 4.

3 Final terms of reference

1. Without limiting the consideration of the review, the review will investigate:
    a. the cost of applications for patents; and
    b. processing times of patents; and
    c. advice provided by the Australian Government with respect to the patent application process; and
    d. awareness of the patent application process; and
    e. the cost and times required to enforce standard patents; and
    f. any other barriers or impediments that prevent Australian businesses filing and obtaining patents; and
    g. Government programmes to assist Australian SMEs seeking patent protection, including protection overseas.

2. The review should recommend changes that would improve the accessibility of the patent system in Australia to Australian SMEs, and improve the support provided to Australian SMEs applying for IP protection both in Australia and overseas, taking into account the factors to be considered above.

4 SME experience of the patent system

In the most general terms, Australian small to medium enterprises (SMEs) do not make much use of the patent system, and it appears that they do not export much IP. SME is defined in this report as it is by the Australian Bureau of Statistics,[3] except as otherwise indicated.

In its 2020 IP report, IP Australia noted that 95% of patents awarded were granted to non-residents, and only 5% to Australian residents.[4] This is a surprising figure, but by way of comparison it should be noted that in New Zealand the figure is 6% for patents granted to local residents, in Israel 18%, in the UK 52%, in Canada 9%, and in Germany 64%.[5] (Two caveats should be lodged here, one that it is possible that some of the non-resident companies are Australian-owned, and the other that in Germany and the UK some patents may have been filed through the European Patent Office.)

The number of intellectual property (IP) rich companies in Australia (meaning companies which house technology innovations of some sort) is not known – though one of our respondents guessed it to be about 5,000. Getting good data about the population of SMEs that might be candidates for patenting is difficult.

One method of estimating the number of Australian SMEs that could potentially produce patentable inventions is by identifying innovation-active SMEs also performing research and development (R&D).[6] By extrapolating the results of SMEs from the Business Characteristics Survey (BCS), it is estimated that there were 55,567 SMEs of this type in the 2018-2019 financial year.[7] It should be noted that this is just an extrapolation. This seems to be an extraordinarily high number, and results from an estimate.

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[3] Australian Bureau of Statistics, *Small Business in Australia*, 1321.0, Australian Government, 2001, accessed 17 February 2021. https://www.abs.gov.au/ausstats/abs@.nsf/mf/1321.0.

[4] IP Australia, *Australian intellectual property report 2020*, p 8, IP Australia, Australian Government. https://www.ipaustralia.gov.au/sites/default/files/reports_publications/2020_ip_report.pdf.

[5] WIPO (World Intellectual Property Organization) (2021) *WIPO IP Statistics Data Centre - Patents*, accessed on 27 January 2021. Note that 2019 is the latest full year statistics available. https://www3.wipo.int/ipstats/editIpsSearchForm.htm?tab=patent.

[6] An innovation-active business is one which has undertaken any activity during the reference period including: introduction of any type of innovation; and/or the development or introduction either still in progress or abandoned.

[7] Australian Bureau of Statistics, *Characteristics of Australian Business (2018-19)*, 8167.0.001 and 8167.0.008, Australian Government, 2020, accessed 29 January 2021 https://www.abs.gov.au/statistics/industry/technology-and-innovation/characteristics-australian-business/2018-19. Estimate derived from BCS data by estimating the number of SMEs that are innovation-active businesses and at the same time performed R&D in the 2018-19 FY. It includes all SMEs doing R&D. The calculation was performed by scaling up the percentage of innovation active SMEs that perform R&D (as

The number of Research and Development Tax Incentive (RDTI) registrations may also provide a general sense of the number of Australian companies investing in research and development (R&D) in recent years. While we would not expect a one-to-one relationship between RDTI registrations and patent filings, the comparison is worth noting. It is not a perfect comparison, but it may be revealing.

The RDTI program would suggest that the 5000 businesses (with technological innovations) estimate is low.[8] By the end of June 2020 there were 9,323 registrations representing 9,886 small to medium-sized companies participating in the RDTI program.[9] In addition, of these, 1,990 were new to the program: whilst this figure includes all businesses, not simply SMEs, it points up the availability of information about newcomers to the R&D area, and gives a lead for IP or commercialisation offers of service.[10] The RDTI is a tax incentive scheme designed to encourage business expenditure on research and development: these data should assist with Recommendations 4 and 5, on the importance of finding and communicating with IP rich companies, and in particular, new ones.

The estimated 55,567 SMEs from the BCS and the c. 10,000 SME applicants for the RDTI contrast with fewer than 1,800 annual patent filings by Australian SMEs between 2015 and 2019.[11] It can only be said that the vast number of companies attempting to produce new knowledge are failing to use the IP rights system to secure ownership of this new knowledge – or simply failing to produce it. Perhaps they avoid the patent system? They may produce new knowledge that is not patentable. Or the resulting technology may be patentable, but there may be no demand for it in the market. Or it may be that trade secrets or other types of IP are better suited to protect the fruits of their R&D. There are indeed other options. It should be noted though that the RDTI scheme measures novelty in a somewhat different way from the novelty and inventive step required for patenting.

Perhaps the RDTI scheme has become a standard corporate subsidy whose purpose has been lost. The gap between RDTI registrations and patent filings over a ten-year period is

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sampled by the BCS) to the total estimated population of employing business that the BCS is intended to represent, which is 857,000 business (782,000 are small firms 0-19 employees and 70,000 are medium size, 20-199 employees).

[8] The RDTI program requires that head entities register on behalf of their subsidiaries, which is why the number of participating SMEs exceeds the number of registrations. Note also that the RDTI uses a different definition of SME to the definition used elsewhere in this report: instead of defining SMEs by the size of their workforce, the RDTI defines SMEs as companies with less than $20 million aggregate annual turnover.

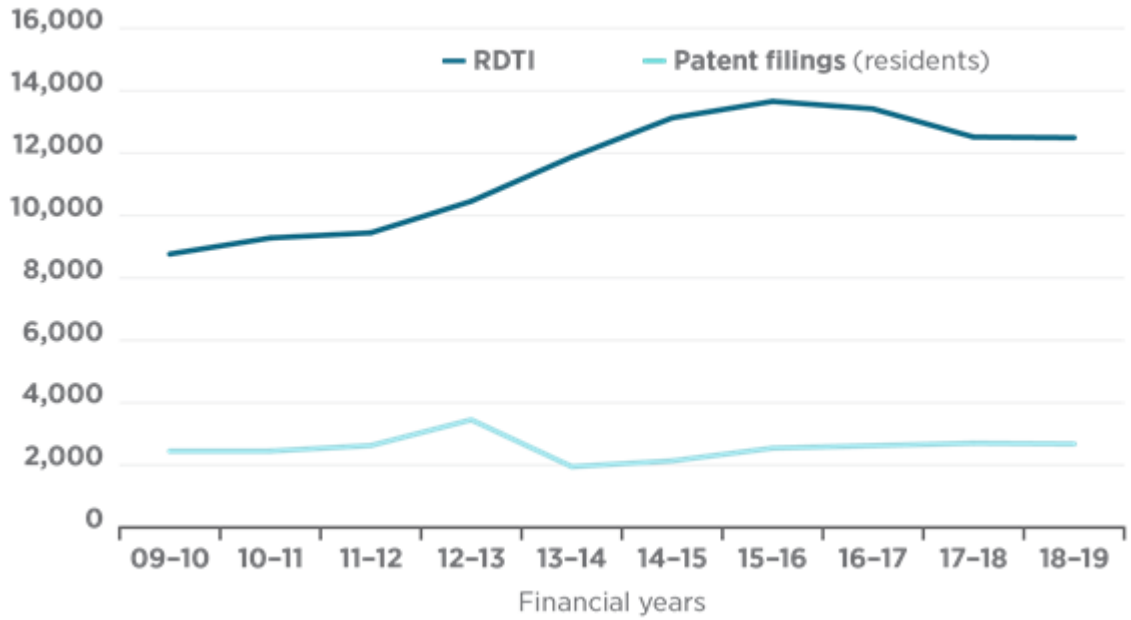
[9] Department of Industry, Science, Energy and Resources (DISER) (2020) *Innovation and Science Australia: annual report 2019–20,* p 19, DISER, Australian Government. https://www.industry.gov.au/sites/default/files/2020-11/innovation-and-science-australia-annual-report-2019-20.pdf.

[10] As above.

[11] IP Australia, *Patent filings* [data set], IP Australia, Australian Government, unpublished, accessed 4 December 2020.

shown in the graph below. There are some caveats to be entered about interpreting these data, one being that the gap between discovering something new, and filing for a related patent, may be quite long: and as already noted the kind of novelty sought by the RDTI scheme may not be readily patentable.[12] Despite all this the gap is huge, and one would expect more spinoff in the patent system.

Figure 1.1 – RDTI and patent filings by AU residents in 2009–10 to 2018–19



Source: IP Australia (2021) and DISER (2021)

Another way to look at the issue is to consider those SMEs who obtained an R&D tax concession, and see how many of those firms also filed for a patent. Among Australian SMEs that obtain an R&D tax concession, the share that also filed a patent has declined between 2004-05 and 2016-17.

[12] Data notes:

- The 2010–11 financial year RDTI registration data is for the R&D tax concession (RDTC) program, which was replaced by the RDTI program in 2011–12 financial year. There are some differences between the RDTI and the RDTC:
    - For example, from the financial year 2011–12 onwards, the number of registrations includes applications by companies in both the refundable and non-refundable tax offset components.
    - Companies in the refundable tax offset have below $20 million in annual aggregate turnover. Companies in the non-refundable tax offset have $20 million or above in annual aggregate turnover.
- Companies are required to submit an application form for every income period in which they conduct their R&D activities. R&D activities may therefore span multiple income periods.

Table 1 – Australian SMEs that obtain an R&D tax concession and which patent, 2004-05 to 2016-17

Year	SMEs with an R&D tax concession	SMEs with an R&D tax concession that also filed a patent	Percentage share
2004-05	3 798	336	8.8%
2005-06	4 018	335	8.3%
2006-07	3 926	336	8.6%
2007-08	4 622	323	7.0%
2008-09	5 337	334	6.3%
2009-10	5 683	336	5.9%
2010-11	6 015	354	5.9%
2011-12	6 323	325	5.1%
2012-13	7 649	421	5.5%
2013-14	8 843	262	3.0%
2014-15	9 841	329	3.3%
2015-16	10 350	348	3.4%
2016-17	10 122	371	3.7%

Source: Business Longitudinal Analysis Data Environment (2020) unpublished.[13]

It should also be noted that, whilst we allow multiple international businesses to access the Australian market through the patents granted (the 95% referred to above), our own companies are also active overseas securing patents in many other countries – particularly through the Patent Cooperation Treaty (PCT) arrangements. Just as foreign companies will be benefiting from having certain monopolies over technologies in the Australian market, and earning license fees from Australian companies, our own companies are active in international markets and accrue revenue from both those activities.

[13] The number of SMEs that obtained an R&D tax concession is calculated as the number of SMEs (firms with less than 200 employees) that recorded a positive R&D tax concession on their Business Income Tax statement in a given year. The R&D tax concession was changed to the R&D tax incentive in July 2011 – references to the 'concession' should be read as references to the 'incentive from 2011-12 onwards.

It is known that 9,533 patent applications were filed by Australian residents for patents overseas in 2019 and, on average, Australian residents file 3.6 patent applications overseas for every standard patent application filed in Australia.[14] The top destination for overseas patent filing by Australians is the United States.[15] The figure of 9,533 filings seems to be a tiny number – especially when one considers the multiplier effect of the PCT, whereby a single patent application can be made in a number of countries at once.

This 'balance of payments' question – as to whether access to our market through securing Australian IP rights enriches international companies more than our own companies which secure IP rights abroad – is one which is worthy of constant monitoring. We have data from the Productivity Commission (PC) and the World Bank, but these data include large companies as well as SMEs. It would be advantageous to know whether the SME position, in terms of revenue balance, is different from that of large companies: this information should influence policy settings.

- This is a major question: the strength of Australia's IP export industry is the issue, and the picture looks grim. (See **Appendix F**.)

(i) New research on SMEs and the patent system

Preliminary findings from a forthcoming economic research paper further fill out the picture of how SMEs engage with the patent system.[16] This research looks at SME usage of the IP system during the period between 2001–02 and 2016–17.

This research confirms that few Australian SMEs use the patent system. The number of Australian SMEs owning patents has been stagnant and their proportion of total SMEs is small – with about 1,400 Australian SMEs owning at least one patent in each year during the study period. This accounts for about 0.2 per cent of the total active SMEs – a ratio which remained stagnant over the study period. The larger an SME becomes, the more likely it is to become a patent owner: the average ratio of patent owners to non-patent owners during the study period was 0.1% for micro businesses, 0.4% for small businesses, and 2% for medium businesses. (For comparison, the ratio is 9.7% for large businesses).[17]

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[14] IP Australia, *IPGOD* (2021), unpublished.

[15] As above.

[16] IP Australia, *Australian small and medium enterprises (SMEs) and intellectual property rights*, IP Australia Economic Research Paper, Australian Government, 2021 (forthcoming).

[17] For definitions of business size generally see Parliament of Australia, *Definitions and data sources for small business in Australia: a quick guide,* Research Paper Series 2015–16, Australian Government, 2015.

https://www.aph.gov.au/about_parliament/parliamentary_departments/parliamentary_library/pubs/rp/rp1516/quick_guides/data.

Of those SMEs that do own patents, 44% are in manufacturing and a further 19% are in professional, scientific and technical industries. However, even then, the proportion of SMEs owning patents is still small, at 1.5% overall. Despite the overall low participation numbers, it is encouraging to see that the manufacturing sector (often populated by VET-sector graduates) is in the lead in terms of SME patent use.

But, as noted, the overall picture is not strong: a report from the European Union Intellectual Property Office in 2019 shows that SME use of the patent system in the manufacturing sector in Europe is about four times that of Australia,[18] 4.6% of SME patent holders in Europe as opposed to 1.2% in Australia.[19]

Australia's industry mix does not lend itself to large numbers of patent filings. While manufacturing involves higher innovation spending and patenting, it comprises a smaller share of the Australian economy than in peer economies. The Modern Manufacturing Strategy's vision is for Australia to be recognised as a high-quality and sustainable manufacturing nation. As a consequence, more Australian firms may choose to pursue IP rights, including an increase in patents.

(ii) Export: data on SME use of international patents.

Queen Elizabeth I sought to enrich the British economy by distributing monopolies, often to foreign craftsmen who brought new technologies (and also provided a source of taxation revenue) – but it might appear that we in Australia are using the IP rights system to enrich other countries, if we take the 95% international patents figure as indicative on that question.

However, we cannot progress with this without comparing the wealth offered to foreign SMEs (through the large number of patents awarded to them), with the wealth accrued by our own SMEs working in other countries.

Following the definition given by the Australian Bureau of Statistics (ABS), small and medium enterprises (SMEs) in this study refer to those employing fewer than 200 employees (full-time equivalent) in Australia. SMEs are further categorised into three groups: micro businesses (between 0 and 4 employees), small businesses (between 5 and 19 employees) and medium businesses (between 20 and 199 employees).

[18] (EPO) European Patent Office and the EUIPO (European Union Intellectual Property Office), *High-growth firms and intellectual property rights: IPR profile of high-potential SMEs in Europe,* EPO and EUIPO, European Commission, 2019. https://euipo.europa.eu/tunnelweb/secure/webdav/guest/document_library/observatory/documents/reports/2019_Highgrowth_firms_and_intellectual_property_rights/2019_Highgrowth_firms_and_intellectual_property_rights.pdf.

[19] Note that the 1.2% figure was derived using the same methodology as the European research above. The 1.5% figure in IP Australia's research was derived using a slightly different methodology, which explains the slight difference between the two figures.

Queen Elizabeth I did not live in an era of world trade agreements, but we now have to balance a relatively open economy with the kind of protectionism inherent in the patent system: we grant patents in Australia both to Australians and to international entities – but we also successfully seek them abroad. We should be vigilant about the balance-of-payments question, and whether we see a net benefit from this exchange.

The USA, Germany and Korea are net exporters of IP and Australia is a net importer of IP. It's a problem.

Critics of the patent system are very numerous – from the human rights side and from the competition law side – but it is the system we have all over the world. This being the case, we should at least ensure that it is working for Australia.

The collection of data on the comparative situation of Australia in the world of IP could well be crucial in policy development and lead to change in the future – for example, if the data permits, to a new focus on enabling the internationalisation of Australian IP.

Recommendation 1:

Focussing particularly on the export of intellectual property (IP) in the form of patents, that the Australian Government seek to collect and monitor data on small to medium enterprise (SME) use of the international IP system, and on the resulting revenue, comparing it with international SME use of the Australian IP system and its revenue.

5 Costs of obtaining patent protection

(i) IP Australia charges

Application fees are the thin edge of the wedge. Most costs are the attorney fees.

A tiny minority of respondents considered that the administrative fees levied by IP Australia for patent filings and subsequent expenses were too high. Most said that these were not a difficulty and a number said that they were modest in comparison with international fees for the same services; some complained that other countries were exploiting their own rights system to obtain revenue through patent applications.

(ii) Other Costs

The costs begin to mount up with the professional fees of patent attorneys and IP lawyers whose advice is sought in the process of preparing a patent application, and then, when going international, a company faces escalating costs again. Seeking patent recognition in a variety of other countries, through the Patent Cooperation Treaty (PCT) provisions for example, begins to cause costs to accumulate. We were informed that patent attorneys in Australia charge between A$400 and A$700 per hour, whereas in New York the fee is usually around US$800 per hour. Some clients prefer to go straight to the US despite the extra costs, as it is considered to be economical in the long run if seeking international patent recognition.

It's worth investing in a good patent attorney. We used to file in US, but now invest in good attorneys in Australia. All are expensive, but it's a necessary cost.

Despite this, very few respondents complained about Australian patent attorney fees, and some observed that the attorneys were very highly skilled and added a great deal of value to their proposal. Some recognised that point, whilst also saying that these costs came as a great shock to them, and that they were unprepared for what lay ahead. This led some to call for capped fees, so that patent attorney costs could not endlessly blow out as more and more communication took place.

Some complained about the search for 'prior art' (the issue of whether the invention has been thought of already, or even patented already), suggesting that patent attorneys had a vested interest in not being able to find any, and that an SME with IP to protect would be better off using a separate patent search firm. It should be noted that IP Australia offers a modestly priced prior art search service.[20]

Whilst the IP Australia filing fees are not considered to be a significant financial impediment, many SME participants were unaware of how the fees for patent protection would mount up, especially when export was envisaged, and when activity would occur in a number of international markets. There was clearly a degree of anxiety about how to control this, with the multiplying fees from different national jurisdictions, but also the increasing professional services fees.

Finding 1:

IP Australia costs are not a significant obstacle to small to medium enterprises. Professional fees are in many cases unexpectedly high.

[20] IP Australia, *International type search*, IP Australia website, accessed 17 February 2021. https://www.ipaustralia.gov.au/patents/applying-patent/provisional-application-what-include/international-type-search. IP Australia, *Search for a standard patent*, IP Australia website, accessed 17 February 2021. https://www.ipaustralia.gov.au/patents/applying-patent/standard-patent-application-process/search-standard-patent.

6 Processing times for patents applications

The processing times required by IP Australia to turn around a standard patent application were generally regarded as satisfactory. The fact that expedited review is available upon request, at no extra cost, provides a kind of antidote to any claim that delays are excessive. This is a most important aspect of the service and needs to be maintained and developed.

Australia is amongst the fastest jurisdictions in the world.

This is a red herring. SMEs applications shouldn't be dealt with quickly. … It's important to defer prosecution costs.

The standard turnaround time for a patent examination report is one year, and whilst some said that this was not a problem to them, and others said that this delay was even useful as costs were postponed, others did say that this is too slow during a period of ferment in terms of scientific discovery and invention. A few respondents spoke of the need to use Artificial Intelligence (AI) techniques to dispose of preliminary matters, and while most of us are aware of some successful uses of AI techniques in response-management, most of us have also suffered from this. It may be that in the fullness of time much patent examination can be resolved in this way, but not yet.

There were a few submissions on the issue of the phased removal of the Innovation Patent from August 2021.[21] This option is being removed because the Innovation Patent was ineffective in various ways, often not reaching finality with the examination phase, and being misused by many foreign applicants. Notwithstanding this, some see a gap left by its absence, particularly in relation to speedy responses, but also in relation to its usefulness for incremental advances in a particular technology. Some also saw it as a way of familiarising new participants in the enterprise culture with the patent system, helping business to get a feel for it in a non-onerous way.

[21] See Appendix A.

Whilst the speed and quick access to the innovation patent might be missed, IP Australia now stresses its expedited review service for the Standard Patent,[22] and suggests that its speed matches that available to Innovation Patent applicants. Where the cost of entry into the system is concerned, it recommends the use of the provisional patent as a low cost route.[23] Where incremental changes are concerned, IP Australia notes that patents of addition allow additional protection to be introduced as part of the patent process.[24]

The Australian Government has opted for a high-quality standard patent as the principal vehicle for IP rights in technology, but the standard patent ought not to be allowed to become a solution which is too hard for the average SME.

In the end the offer of expedited review is there, and provides the solution, though many were not aware of it.

Recommendation 2:

That processing times for the standard patent be continually monitored, and that the expedited examination be maintained as a priority.

[22] IP Australia, 'Expedited examination for standard patents'*, Patents,* IP Australia website, 2020.

https://www.ipaustralia.gov.au/patents/applying-patent/standard-patent-application-process/examination-standard-patent/expedited-examination-standard-patents.

[23] A provisional application is an inexpensive way of signalling an intention to file full patent application later on. A priority date establishes the fact that the provisional patent applicant is the first person to file a new invention. While a provisional application doesn't provide the protection of a full patent, it does give up to 12 months for the applicant to consider their options before deciding to proceed with a patent application.

[24] IP Australia, *Applying for a patent of addition*, IP Australia website, accessed 17 February 2021. https://www.ipaustralia.gov.au/patents/understanding-patents/types-patents/applying-patent-addition.

7 Education programs and awareness

IP Australia has gone to great lengths in recent years to develop its information programs and the level of assistance which it provides. Nevertheless, it was striking to note how few of the respondents – particularly those actually in small to medium enterprises (SMEs) – were aware of the IP Australia outreach programs. These programs are now extensive and are available online through the IP Australia website.

They include:

- SME Portal: digital material tailored to SME needs[25]
- the posting of an IP Counsellor to China
- development of a virtual assistant ('Alex') to assist with inquiries, including out-of-hours inquiries
- pilot case-manager scheme: individual case managers may be allocated on request[26]
- *Engaging an attorney toolkit*[27]
- IP for digital business assistance for SMEs[28]
- case studies of successful patents and commercialisation[29]
- *IP Toolkit for Collaboration*: a resource to simplify the management of IP in collaborations between researchers and business[30]

> *IP Australia has a good package of information available, better than most other patent offices. The real problem that IP Australia has [is that] by the time that someone engages with IP Australia and discovers any of these resources that are available to them, that's a person who's already thinking about IP and what to do about it. There's this huge mass out there that don't have any awareness at all.*

[25] IP Australia, *Portal for small and medium enterprises (SMEs)*, IP Australia website, n.d. www.ipaustralia.gov.au/sme-portal.

[26] IP Australia, *Patents case management for SMEs,* IP Australia website, 2020. www.ipaustralia.gov.au/patents-case-management-smes.

[27] IP Australia, *Engaging an attorney toolkit,* IP Australia website, n.d.

www.ipaustralia.gov.au/patents/engaging-an-attorney-toolkit.

[28] IP Australia, *IP for Digital Business,* IP Australia website, n.d. www.ipaustralia.gov.au/ip-for-digital-business.

[29] IP Australia, *Case studies,* IP Australia website, n.d. www.ipaustralia.gov.au/tools-resources/case-studies/.

[30] IP Australia, *IP Toolkit for Collaboration,* IP A website, 2016 www.ipaustralia.gov.au/understanding-ip/commercialise-your-ip/ip-toolkit-collaboration.

Quite a few respondents only became aware of these products through our contact and questioning, and once alerted, were very positive about what they found in them. The fact is that many steps have been taken in recent years to provide introductory material for those wrestling with the question of whether to patent, or how to patent. (Of course, these programs also include introductory material on trade marks and other IP.)

Later in this report, it will be noted that fear of litigation is a major factor in avoiding the patent system, but under this present heading it should be noted that many respondents asserted that ignorance is a major problem: ignorance of the principles of IP management, of the leading principles of IP law, and of the risks of not understanding basic IP law where one's company is developing new technology without the protection of IP rights being granted.

We should then ask whether it is ignorance or fear that is the main inhibiting factor. If we look at ignorance for the moment, there are several parts to this. The more knowing and experienced of those in the SME sector had got over the 'ignorance' phase by several mechanisms:

- the appointment of somebody highly experienced in these issues as chair or in a senior position
- having the advantage of a commercialisation specialist giving advice
- living through 'the school of hard knocks'
- learning from the experience of dealing with patent attorneys, or IP lawyers, and particularly from the familiarisation seminars and newsletters provided by them.

Clearly there are multiple sources of education and training for would-be entrepreneurs, and the network of professional services firms is very important in providing such services. One university referred to the pro bono work done by a patent attorney firm, which offers to mentor student business start-ups in the principles of IP ownership.

These multiple sources of education are highly valuable and form an important part of the IP ecosystem.

In terms of general community awareness of IP management principles, there seems to be room, at university level, for a Graduate Certificate in Intellectual Property Management. This program could centre partly on law, but mainly on strategic business management; on issues such as whether to seek protection for some IP, or not to; business strategy; and delineation of business purpose. This could be a business school program. The economic history of patenting is rich with case studies, both in Australia and abroad, and with lessons to be learnt, going back to the use of monopolies by Queen Elizabeth I.

The Vocational Education Training (VET) sector has had some excellent programmes in IP management training. These have lapsed owing to low enrolments, but their content would certainly be useful to IP Australia and AusIndustry. They should not be lost to community knowledge.

Incidentally, it is noted that significantly more managers in industries such as manufacturing reported having VET-level education, compared with university education – and manufacturing tends to patent more than other sectors. [31]

There is room for cooperation between the VET and university sectors, and AusIndustry and IP Australia in developing joint education programs. In the era of micro-credentials, or modules, there is plenty of opportunity for constructive collaboration between the four parties.

The specialists in commercialisation with whom we spoke (noting that these were not specialist patent attorneys or lawyers, but commercialisation experts) emphasised the need for a patent strategy to be housed within an overall commercial strategy: that one could not have a patent strategy by itself. The advice is as follows: establish the purpose and goals of your business first, and then see how or whether IP rights fit into this. This was echoed by some experienced members of the SME community. A commercialisation advisor said that, when asked about the advisability of patenting or not, he would always ask the question *'What are you seeking to prevent?'*

One respondent said *'If you just have a patent strategy you'll go down in flames.'*

Another said: *'If you have a scientist that doesn't have a strong business acumen, you end up missing strategy.'*

There are two points here:

- Ideally, education in IP rights must be accompanied by, or contained within, education in commercial strategy.
- Secondly, the educational programs must reach the appropriate audience. Lack of awareness of IP Australia educational programs appears to be widespread, despite IP Australia's enormous efforts to reach this target audience.

[31] Australian Bureau of Statistics (2017) 'Table 5 - Highest level of education completed by the Principal Manager by innovation status, by employment size, by industry', *Management and Organisational Capabilities of Australian Business, 2015–16*, accessed 15 December 2020. https://www.abs.gov.au/statistics/economy/business-indicators/management-and-organisational-capabilities-australian-business/2015-16/81720do007_201516.xls.

8 IP is scary

I'm a clinician and I think both in the clinical sciences and biomedical sciences, I think genuinely there's almost a complete lack of understanding of the whole [patent] process. IP is scary. The thought of a patent...there's just generally a lack of understanding and I think that applies to many researchers.

A particular problem is the difficulty STEM (science, technology, engineering and mathematics) graduates have with legal thinking and terminology. It appears to be unfamiliar terrain for many, despite the many excellent initiatives which universities have undertaken in recent years to integrate the different types of training: legal and scientific. It seems that legal terminology has a particular migraine-inducing capacity and represents an unfamiliar kind of abstraction for those who are used to watching how the physical world plays out. This means that significant thought and expertise has to go into communication about the work of IP Australia, AusIndustry and the Department of Industry, Science, Energy and Resources (DISER) generally.

…most researchers have very limited exposure to business or, you know, what I used to call "the real world".

IP education is a big problem amongst the biomedical research community and particularly the clinical research community. I don't think health services across the country are even very good at understanding that.

…while the universities will actually assist and can use grant funds for researchers at a university to pay for patent application and patent-associated costs, the clinicians don't get that same support from hospitals.

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9 Three inventor-generated difficulties

It is important to note that not all difficulties will come from government institutions or from challenges in obtaining venture capital funds. The inventors themselves supply a significant number of difficulties, which render the commercialisation task all the more difficult.

The first of these is **inventor infatuation:** those who create some new technology have a tendency to fall in love with it, and to be blinded by love for it. That is, they tend not see its limitations, that it may be technically limited, or that it may not succeed in the market through lack of demand, or through pricing difficulties.

The second is **inventor hubris**, meaning that the inventor thinks that the invention itself is the most difficult piece in the puzzle, and that everything to do with commercialisation – such as financing, marketing or distribution – is a simple matter that can be dealt with by googling. The assumption here is that the moment of genius which produced the invention will carry them through the commercialisation process, and that they will quickly be able to learn the 'easy' bits that are involved in successful market entry. (Those who actually try to sell things will of course despair at this business naivety.)

The third major difficulty with the behaviour of inventors is the phenomenon of **inventor possessiveness**: a number of people may think that they have had the idea that has become central in the project and that they made the crucial suggestion that tipped the balance. As a consequence, sorting out ownership questions becomes one of the most difficult parts of the initial stages of commercialisation.

- It is often said that 'success has many parents', and the maxim for IP should be that 'IP ownership rights must be settled at the outset, before there is any money involved'.

In dealing with small business and the patent system, not everything is the fault of external parties (such as government): the behavioural problems described above have to be recognised and dealt with. There is a psychological or counselling element in the commercialisation process: as one respondent said, there is a need for 'curation' (meaning to refer to this kind of factor). These factors are a barrier to the creation and success of new IP rich SME's, and need to be dealt with in any comprehensive approach to this issue.

10 Hospital, clinical and agribusiness

This section has been developed not only because these issues were raised by respondents, but also because of their relevance to present government activity in the area of modern manufacturing.[32] See **Modern Manufacturing Initiative #3: Medical Products**.

The review was told that there is a significant difference between the situation of clinical researchers, compared with those in the universities – and the drivers appear to be different.

- Clinical researchers who have invented a procedure or a technology generally want to get it into the market and have it working so as to improve health care. As a result, they are often not very familiar with IP law or management, and do not have the time to spare for it.
- University scientists, on the other hand, have the backup of their commercialisation offices, and may be able to get quick advice. Academic researchers, it was said, 'were more aware of the rules of the IP game, and were particularly alert to the question of ownership of IP'.

> *…in the hospital there's a lack of awareness of patenting and often by the time they find out or think they need to patent, it's too late.*

This means that a particular effort of communication must be directed at hospital and clinical inventors, who are often time-pressed and do not easily see on the horizon a source of advice or support. It is true that some in the clinical services often turn to university commercialisation offices for help in this area, but this is a possibility only for the few. The same principle applies to inventors from any technical discipline, outside of the shelter provided by a commercialisation office.

It is also true that some states have tried to deal with this, providing commercialisation assistance within their health services.

[32] Department of Industry, Science, Energy and Resources (DISER), 'Modern Manufacturing Initiative and National Manufacturing Priorities announced', *DISER,* 1 October 2020, accessed 4 January 2021.

https://www.industry.gov.au/news/modern-manufacturing-initiative-and-national-manufacturing-priorities-announced.

This information raises just one sector to explore – and in which to pursue the search for patentable inventions which lead to the creation of small to medium enterprises (SMEs). But it also suggests that there may be other sectors of the Australian economy in which novel solutions are being found – inventions which also may rise to new businesses. The clinical health carers are obviously always on the edge, looking for improvements, and may be the most open to new processes or treatments. But there will be many other sectors where novelty is sought, as discussed in 'Chapter 20: Hidden potential and the "flying squad" approach'.

Where an invention is created out of professional practice, it will not normally be possible for the institution to develop it, as there may be required prototypes, manufacturing of scale, and other commercial activities, so the usual response will be to house that invention in a spin-off company, funding those activities from elsewhere. Every invention is a potential small business and, for this, help is needed.

It should be noted that the review heard of an identical issue coming from the agribusiness sector: the respondent (though trained in science) found that as the CEO of her company, she was confronted with a whole new area when it came to patenting issues. She felt that it was beyond her ken: it was confusing and new.

11 The ‘Flying Squad’ approach: getting out and about

The difficulty of reaching those who need information is puzzling in an era of hyper-communication. Surprisingly, that which is essential to us is drowned out. But we were told that if the advice comes to people, they will listen.

So, for example, people from the Therapeutic Goods Administration might come here every year or two and run a seminar. We've got a big auditorium. It would be great if IP Australia did something similar.

Commercialisation services which are offered should be offered actively, rather than passively existing as a service which may be tapped: this should be a ‘Fly in, Fly out’ (FIFO) approach, so to speak – meaning that we come to you, and once contact is made we maintain contact. The approach should be ‘we seek you out’.

(i) Incubators, accelerators and support associations

Many respondents were helpful in suggesting various ways of extending the reach of IP Australia through engaging other groups. These included industry or technical associations; start-up incubators and accelerators; accountants and bookkeepers; finance brokers; and high schools (to target final-year students). Energising outreach activities to directly engage users as well as their other circles gives the best chance to expose even the most deliberately ignorant to the benefits and necessity of IP management.

The UK’s Patent Libraries (PatLib) Network achieves exposure by placing IP expertise within public libraries across the country.[33] Having a prominent and easy-to-access national presence can only serve to normalise IP as part and parcel of general commercialisation and entrepreneurship.

[33] UK Government, ‘Guidance: UK PatLib Network’, *Patents,* UK government website, 2020. https://www.gov.uk/government/publications/uk-patlib-network.

However, of these, business incubators and accelerators play a huge role in business creation and are scattered throughout the country. Some are private, some are state-run, some are affiliated with universities. There has been rapid growth in their number, with hundreds of new businesses generated. The Australian Government has involved itself in funding some of them and has an ongoing subsidy program[34] as well as a visiting mentor program for incubators.[35]

According to one source, there were 172 start-up accelerator programs in Australia in 2019,[36] with the biggest number being in Queensland. Another source estimates that there were 22 or more accelerators in 2016,[37] and cites a burgeoning interest in the area. Universities have contributed to a large part of this growth. Some estimates which we have not been able to verify indicate that the startups launched by incubators in recent years number in the thousands. Incubators and similar support organisations that are part of the start-up ecosystem should be a primary community partner of any IP Australia/AusIndustry action.

There is a highly significant engine for growth here, which calls out for active collaboration from government. An active involvement with the incubators is essential. Patenting will not be relevant to many business start-ups, but a training package which combines IP education with commercialisation education will be essential. All new businesses come from an idea, whether patentable or not. It should be noted that there is considerable activity undertaken by the states and territories in the development of incubators and accelerators, and coordination between federal agencies and state and territory agencies in this area is essential.

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[34] Senator the Hon Arthur Sinodinos [Former Minister of Industry, Innovation and Science], *$1.4 million in incubator grants to benefit Australian start-ups* [media release], Parliament of Australia, 30 May 2017.

https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id:%22media/pressrel/5306986%22.

DISER, 'Incubator Support – New and Existing Incubators', *Grants & Programs,* business.gov.au*,* 20 January 2021, accessed 25 January 2021.

https://www.business.gov.au/grants-and-programs/incubator-support-new-and-existing-incubators.

[35] DISER, 'Incubator Support – Expert in Residence', *Grants & Programs,* business.gov.au*,* 20 January 2021, accessed 25 January 2021.

https://business.gov.au/Grants-and-Programs/Incubator-Support-Expert-in-Residence.

[36] J Hinton, *Number of startup accelerator programs in Australia 2019 by state or territory,* Statista website, 2020, accessed 5 January 2021.

https://www.statista.com/statistics/1172409/australia-startup-incubator-programs-by-state/.

[37] University of New South Wales (UNSW) Business School, *The role and performance of accelerators in the Australian startup ecosystem,* report to the Australian Government Department of Industry, Innovation and Science, UNSW, 2016, p 7. http://unsworks.unsw.edu.au/fapi/datastream/unsworks:38003/bin8ca2e40f-1d69-4eb9-8d99-e332794b8f8f?view=true&xy=01.

There are other virtual startup support groups such as She-EO. With respect to regional areas there are important regional networks including Rural Research and Development Corporations, business chambers, regional government associations or local councils.[38]

Recommendation 3:

That the Department of Industry, Science, Energy and Resources partners with IP Australia in developing an integrated online training program which houses training in intellectual property management within an overall business strategy training course.

Recommendation 4:

That a list be developed of all technology-centred small to medium enterprises, including particularly new entrants, with a view to offering such an integrated intellectual property management/commercial strategy training course as an induction. Research and Development Tax Incentive registrations should provide a good starting point.

Recommendation 5:

That in developing such a list, there should be a twice-yearly review of new businesses created, with a view to offering a program (such as the above) as an induction for new technology-centred companies, and in order to alert them to IP Australia guidance tools. New businesses should be contacted early.

Recommendation 6:

That IP Australia and AusIndustry work together to reach groups and bodies associated with SMEs. AusIndustry should also explore opportunities to raise the profile of intellectual property with small to medium enterprises, particularly those developing within incubators.

[38] Cash, Senator the Hon Michaelia, Minister for Employment, Skills, Small and Family Business, *Regional start-up hubs get a boost from Government* [media release], Parliament of Australia, 29 May 2018.

12 Self-filing and the Case Manager service

It's very important that it be done correctly. Money that is spent should be spent wisely and with the right advice. The worst thing that can be done is to set up a self-help system.

Several respondents warned of the danger of self-filing, meaning that an individual who did not seek professional advice (say from a patent attorney) ran the risk of filing an inadequately drafted patent application. It was argued that the problem of rectifying or cleaning up such applications was greater the further down the line the application had gone, compared with the relatively smooth process of working up an application with a patent attorney, and using these services from the very outset. This is similar to the complaint about self-defended litigants in the judicial context, which also came up.

In this way a warning is extended to the general public, along the lines that if you consult a patent attorney early on, you will be rewarded with a smoother process and in the end a less costly process, as unscrambling the omelette is a harder task.

In addition, this warning about self-filing is combined with a complaint about the Case Manager service being offered on a trial basis at the moment by IP Australia. There are two legs to the complaint, one being that the service encourages self-filing, and the other that this service seems intended to replace the role of the patent attorney.

One respondent suggested that the Case Manager service may be close to infringing section 185 of the *Patents Act 1990*, which reads:

> *The Commissioner, a Deputy Commissioner or an employee must not:*
>
> *(a) prepare, or help to prepare:*
>
> *(i) a specification; or*
>
> *(ii) any other document relating to a specification (other than a document which is in an approved form);*
>
> *unless the Commissioner, Deputy Commissioner or the employee is the inventor in respect of the specification; or*
>
> *(b) search the records of the Patent Office otherwise than in his or her official capacity.*

However, IP Australia provides clear instruction to the case managers of the scope and limitations provided by section 185 on the information they provide. Case managers are not preparing any document relating to the patent application, are not providing early indication of patentability, or carrying out pre-filing searches for the customer. Rather, case managers are providing customers with information to navigate the patent system, and they are also instructed to encourage customers to consider the use of a patent attorney.

Early feedback from the Case Manager program indicates that there is a strong desire for customers to talk to a personal contact in order to know how to start, and that is the value of the experiment. Given that the Case Manager service is part of an effort to increase the outreach of the office, and to improve its educational services, it is important that it succeed. The existing Case Manager trial is the kind of activist measure that this review report seeks to promote.

More communication is needed, not less, and this appears to be a valuable addition to the educational offerings of IP Australia. In the light of the complaint, additional communication with the patent attorney profession, to spell out how the program works, would be useful.

It should be remembered that IP Australia has a range of customers, some of whom cannot afford professional legal fees or who are not confident in their ability to secure a patent. IP Australia's experience is that many self-filing applicants do consider using a patent attorney but decide not to because of attorney fees. In any case, the number of self-filing patent applicants remains very low. IP Australia is aware of a number of self-filing success stories but, in any case, it is quick to advocate the use of professional services when needed.

Nevertheless, the service must not run the risk of infringing the *Patents Act 1990*, or of crowding out the private sector: it is the patent attorneys' work which is at stake here – and it should be noted that they are also the complainants. (It would be surprising if the general public were to complain about this service.)

The Case Manager service is exactly the kind of activist model recommended in the review.

Recommendation 7:

That IP Australia review and develop the Case Manager service and spell out the ways in which it operates. This should show how the service assists businesses, while also demonstrating that it conforms with section 185 of the *Patents Act 1990* and continues to provide opportunities for involvement by patent attorneys.

13 The media and public awareness

Many respondents claimed that there was a general lack of understanding of intellectual property (IP) rights within the Australian community, and some made the observation that other countries were now succeeding in creating public understanding of the innovative culture, and of the principles of IP protection. If there is a deficiency here, it should be remedied.

The media could assist us in this task. The demise of such ABC programs as *The Inventors* and *The New Inventors* is to be regretted, though there are probably good reasons for this. Programs like this increase public awareness of the inventiveness which characterises Australian society, and the ways in which this can be harnessed and developed through establishing the rights to IP ownership.

There is a rich store of information and possible storylines held by IP Australia, and some means of media diffusion ought to be able to be found – featuring inventions; the relevant IP rights and how they were obtained; the best available scientific communication; and any human story behind it. (There is always a human story!) Sometimes agribusiness innovations are featured on the ABC program Landline, and this is very helpful. IP Australia holds the plots for many a drama.

There are other avenues available now apart from the mainstream media, in the form of video streaming and podcasts. Capturing these stories and bringing them to light will not only demonstrate to others the possibilities of diving further into the world of IP, but also help to create a culture where innovation and invention could, and should, be celebrated.

Better [outreach] might involve programs to co-opt the population communication channels of the day – social media, YouTube, etc – with IP Australia sponsoring short informative segments or appearances on popular, relevant "innovation" channels or the accounts of popular entrepreneurs for example.[39]

Recommendation 8:

That the Chair of Industry Innovation and Science Australia work with the Secretary of the Department of Industry, Science, Energy and Resources, and the Director General of IP Australia, to sound out media interest in regular program material, and consider further development of social media, streaming video and podcast platforms.

[39] Flinders University, Response No 310097034 to DISER, *Patents Accessibility Review* (2 October 2020) 4. https://consult.industry.gov.au/science-commercialisation/par/consultation/view_respondent?uuId=310097034.

14 Enforcement of patents and litigation

(i) Having a partner

Whilst some companies adopt the strategy of avoiding the patent system and relying on trade secrecy or other techniques ('*building moats*'), others foresaw the need for a strong partner. They realised that the day would come when deep pockets would be needed to defend their patent.

You need to have tens of millions of dollars coming through the door before you can litigate your own patents.

The other possibility is that small to medium enterprises (SMEs) might have to fight the claim that they were infringing themselves. This last possibility sounds a warning to SMEs that, whilst ignorance may be bliss, it is no guarantee that litigation will be avoided.

Avoidance of the patent system may not actually be possible, in the sense that if a company has a technology which it considers to be new, and succeeds in deploying it in the marketplace, it will need to know whether or not it is using a product already patented by some other business. Despite one's best attempts to avoid the patent system, one may be liable for damages.

Some companies, if they did not foresee the need for a strong partner, soon learnt about it from *'the school of hard knocks*'. One experienced SME participant reflected on the refusal of small companies to give away equity in exchange for having a strong partner, for a time when patent legal defence might become essential:

It is better to own 5% of something, than 100% of nothing.

This is connected with the 'David and Goliath' issue, which was raised several times: the small company feels it cannot win when a large company with seemingly infinite resources infringes a patent, and this leads some to avoid the whole patent system.

(ii) Litigation:

On enforcement, one university commercialisation office representative said: *'honed negotiation skill is needed in our jobs'*, and also questioned whether in many cases there was an appetite to enforce rights, even on the part of universities. Universities have big budgets but they are not willing to allocate much to risk capital of this kind, and this points up the need for a funding pool across the university system, or across the national system, for patent costs and defence. SMEs that stand outside the university system are in an even worse position.

From our discussions there is clearly a fear of litigation and that hinders the use of the patent system: many would rather avoid it for fear of being involved in some form of mega-litigation.[40]

Litigation is far too expensive and out of reach of SMEs.

You can't win if you're a small company.

There's no point in having an IP system if you don't have the means to wave the stick.

The PC Report had already flagged the problem of mega-litigation, and cited the comments of a judge in one such case:[41]

As intimated elsewhere in this judgment, these parties are never satisfied unless they are continually turning stones. Certainly it is the case that no stone in the proceeding has been left unturned by them. Even after closing submissions were made, further submissions came in.[42]

This is the kind of story which makes many SME representatives wary of approaching the patent process: there is a view that this will somehow attract hostile litigation.

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[40] A Olijnyk, *Justice and efficiency in mega-litigation* [doctoral thesis] 2014, University of Adelaide, 2014.

https://digital.library.adelaide.edu.au/dspace/bitstream/2440/91442/3/02whole.pdf.

[41] Productivity Commission (PC), *Intellectual property arrangements*, Inquiry Report *No. 78*, p 580, PC, Australian Government, 2016.

https://www.pc.gov.au/inquiries/completed/intellectual-property/report/intellectual-property-overview.pdf.

[42] *Australian Mud Company Pty Ltd v Coretell Pty Ltd (No 7)* [2016] FCA 991 at 866.

15 Fear of patent litigation

The question could be asked: is this is an irrational fear? There are irrational fears, rational fears, and exaggerated rational fears. Our respondents know of stories which are true – and sometimes they are their own stories.

But one of our respondents, involved in a medium-sized technology-based enterprise, said that as an intellectual property (IP) lawyer who had changed career to go into business, he knew exactly what could go wrong with IP litigation. For this reason he had avoided patenting, relying on trade secrets and trusted business colleagues with whom he had a longstanding association.

Another party with experience of the industry said:

Quite clearly, litigation is just far too expensive and out of reach of SMEs. If they are in a position where there is a large corporate involved, or a Goliath or David if you like, the larger corporates just exploit the system. And this is not just normal litigation strategy, but a very intentional strategy to bankrupt these small businesses.

A big company will always … seize the technical advantage over smaller SMEs and fight infringement issues with strategy, and protract negotiations, and just stall, stall, stall, causing more and more professional advice that costs money to be incurred by the smaller entities, to the point they eventually fold financially as they can't afford to fight and you can stretch out litigation for ridiculously long periods.

It can be concluded that the patent system is avoided by many because of fear of litigation and rumours of litigation, and this arises partly because there is no quick and simple legal solution in their line of sight. If a solution could be seen, could become visible and available, this could change. Perceptions also bring about results.[43]

[43] It is noted that the Australian Small Business and Family Enterprise Ombudsman is working on the issue of dispute resolution, at a reasonable cost. It will be necessary to work with this office in this matter. Although it is considered that IP disputes are very specialised and different in character to other small business disputes. Australian Small Business and Family Enterprise Ombudsman, *Outdated court system is failing small businesses: Ombudsman*, Australian Small Business and Family Enterprise Ombudsman website, 1 December 2020. https://www.asbfeo.gov.au/news/news-articles/outdated-court-system-failing-small-businesses-ombudsman.

It is important to note that the statistics only tell the story of known litigation: only some people surface in the courts. The unknown is the number of people actively avoiding the formal legal system and sorting things out as best they can – in a way which is invisible to IP Australia or to the court system. These people need to be reached.

While most of this is unknown, some data about users is available: 28% of patent users reported that they were aware of copying, rising to 34% of SME patent users. About two in three SME patent users sent an infringement letter in response.[44] For those SMEs that did not send a letter, 25% did not because it would be too costly (compared to only 14% of large businesses).[45]

Of all those patent users that did send a letter, the most common response – over 60% – was that the other party either ignored the letter, only temporarily stopped copying, or alleged that the patent was invalid. In 37% of cases the other party either agreed to cross-license or stopped copying permanently.[46]

For SMEs who sent a letter, 45% resulted in the other party permanently ceasing to copy. However, 32% of SME letters were ignored, compared with only 22% of letters sent by large businesses.[47] 75% of SMEs whose letters were ignored believed it was because they were perceived as being too small to be a threat.[48] For all patent users who detected copying but decided not to file in court, the most common reason (56%) was that the potential gains didn't justify the costs, while the second most common reason (19%) was that it would take too long.[49] Of SMEs who were willing to engage in pre-litigation actions, they are finding that these actions are not effective, which discourages them from continuing.

Thus, even with users of the patent system there is a failure to use it fully. It is too costly. It will be too hard to get a result.

But we are mainly talking about the non-users, those who avoid it altogether, the 'known unknowns'. How numerous are the non-users of the patent system? It is probable that the vast majority of R&D-intensive companies do not use the patent system – at least if we compare the number of Research and Development Tax Incentive (RDTI) registrations with the number of patent filings each year.

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[44] K Weatherall and E Webster, 'Patent infringement in Australia: results from a survey', *Federal Law Review*, 2010, 38(1):28-31.

[45] As above, p 36.

[46] As above, p 30.

[47] As above, p 39.

[48] As above, p 40.

[49] As above, p 44.

The government response to the PC warnings was to attempt to solve this apparent boycott by relying on alternative dispute resolution in the form of the IP Australia-administered Mediation Referral Service (MRS) – but this was not a successful initiative.

The other recommendation of the Productivity Commission (PC) was to implement a specialist intellectual property (IP) list in the Federal Circuit Court (FCC), which would include an expanded patents jurisdiction for the FCC (in addition to its existing copyright, designs, plant breeders' rights and trademarks jurisdiction). The IP list would incorporate similar features to the United Kingdom's Intellectual Property Enterprise Court (IPEC), including limiting trials to two days, caps on costs and damages, and a small claims procedure.[50]

The Australian Government noted this recommendation, meaning that no further action was taken. It noted a pilot in the Melbourne Registry of the FCC (which has now been made permanent in the Sydney Registry) to streamline its management of IP matters and to increase the visibility of the FCC for IP matters. While the FCC closely considered the practices and procedures of the IPEC, there were several features of the IPEC that it did not adopt, including the cap on costs and damages. The government did not accept that the FCC should have patent jurisdiction, as it considered that patent matters are complex and should be dealt with by judges with the requisite expertise.[51]

The failure to follow up on the IPEC model was a major deficiency and leaves our approach to solving disputes within the patent system hanging in midair.

[50] Productivity Commission (PC), *Intellectual property arrangements*, *inquiry report no. 78*, p 579, PC, Australian Government, 2016.

[51] Department of Industry, Science, Energy and Resources (DISER), *Australian Government response to the Productivity Commission Inquiry into IP Arrangements,* DISER, Australian Government, 2017.

https://www.industry.gov.au/data-and-publications/government-response-productivity-commission-inquiry-into-intellectual-property-arrangements.

16 Solutions to the legal quagmire

And so the problem has not gone away. Three years later we find another judge raising the same problem but in slightly different terms:

> *Let me conclude with one final observation. The hearing of these appeals has not proceeded smoothly. The three weeks initially set aside for the hearing turned out to be inadequate. The hearing had to be adjourned over for a further week of evidence months later, and then further adjourned for several days of closing addresses. The substantial adjournments were necessary to accommodate the other significant commitments of counsel, witnesses and the Court. I make no criticism. It is what it is. But the sheer length, complexity and delays involved in these appeals does give cause to reflect on the following questions. Should appeals of this type be permitted to proceed as re-hearings* de novo *allowing the parties to run any ground they like, whether raised before the delegate or not, and upon any evidence they choose, whether adduced or available to be adduced before the delegate or not? Or should they be permitted to proceed only upon the grounds and evidence led before the delegate with truly fresh evidence only being permitted in exceptional circumstances? Or should there be no appeal at all from the decision of the delegate, but only judicial review permitted demonstrating jurisdictional error? Or should there be an appeal for error of law only, and perhaps only with leave? Now these are policy questions, and legislative amendment would be necessary. But on any view it is not sufficient to tinker with the problem by fiddling with the standard of proof, which provided no real solution to deal with the length and complexity of what unfolded before me, notwithstanding the case management techniques available. But perhaps a more robust approach can be taken. One solution may be to put the parties on a chess clock to limit a hearing of the present type to 5 days rather than 5 weeks. And instead of 20 volumes of double-sided material as the standard length of a court book, this could be severely confined. Further, perhaps it is time for appellate courts to show some guidance in permitting short form reasons. Anyway, these reasons should not be further drawn out.*[52]

[52] *SNF (Australia) Pty Limited v BASF Australia Ltd* [2019] FCA 425 at 1784.

After the PC response the Federal Court introduced a new IP practice note in 2016,[53] including some measures to encourage parties to refine the real issues and rein in costs. It is not useful for this review to give a detailed assessment of each individual aspect of the practice note. However, it is appropriate to consider whether these changes as a whole have improved the situation for SMEs.

It is worth noting at the outset that interviewees did not raise any concerns with the Federal Court's ability to deal with more complex, high-value disputes between non-SMEs. For these types of cases the Court is widely seen as producing high-quality judgments.

> *Everyone would rather save a dollar if they can, but for some, if the product is worth $100 million annually in Australia, they want to win their case, not at all costs, but they don't want to leave too many stones unturned. Australia is known internationally as a rigorous and robust patent jurisdiction, our judges are well thought of.*

The question for this review is whether smaller businesses have confidence that they can enforce their patents at a reasonable cost.

The table below shows the filing, finalisation and length data of recent patent cases in the Federal Court of Australia.

Table 2 – Patent filings, finalisations and time to finalisation

Fiscal year	Filings	Finalisations	Time to finalisation (average year)	Time to finalisation (median year)
2011/12	52	41	1.36	0.75
2012/13	55	44	1.98	1.50
2013/14	62	66	1.40	0.67
2014/15	33	51	1.52	1.25
2015/16	56	40	1.25	0.67
2016/17	37	49	2.11	1.20

[53] For the current version practice note, see https://www.fedcourt.gov.au/law-and-practice/practice-documents/practice-notes/ip-1. For more on the practice note as introduced in 2016 see: https://www.tglaw.com.au/ip-blog/2016/11/10/federal-court-australia-national-court-framework-reforms-intellectual-property-ip-practice-note-must-read-ip-lawyers-attorneys/.

Fiscal year	Filings	Finalisations	Time to finalisation (average year)	Time to finalisation (median year)
2017/18	50	55	1.79	1.21
2018/19	60	54	1.70	1.19
2019/20	30	39	1.53	1.03
2020/21[54]	28	28	1.39	1.25
TOTAL	**463**	**467**	**1.62**	**1.06**

Source: *Federal Court of Australia (2021)*

The number of annual filings and finalisations has not increased in the years since the IP Practice Note was introduced. It is instructive to compare this to the significant increase in patent filings when reforms were introduced to the predecessor of the UK's IP Enterprise Court.[55] Since the Australian practice change in 2016 the average time to resolve a case went up, and then the mean has dropped year by year since the initial spike (just returning to the pre-2016 average) while the median has stayed flat. This means that immediately after the IP Practice Note was introduced, cases took longer to resolve on average. Since then the cases that used to go for really long periods are now being resolved a little more quickly, but the proportion of cases taking more than a year has not budged.

Unfortunately, the IP practice note does not appear to have substantially reduced the costs of patent litigation or made it more meaningfully accessible to SMEs. Experienced patent lawyers still give estimates for patent litigation that are as high (if not higher) than the PC found in 2016. A recent source from June 2020 says that costs 'are likely to exceed' half a million dollars,[56] while a 2021 guide gives a range between $600,000 and $2.5 million.[57]

Some litigators we talked to recognised the changes in the Federal Court's IP practice note, while still acknowledging that that more needed to be done to make the system accessible to SMEs:

[54] Partial year to 1 February 2021.

[55] Helmers et al., *Evaluation of the reforms of the Intellectual Property Enterprise Court 2010–2013*, report to the IP Office, UK Government, 2015, p 22.

[56] Lee et al., 'Patent litigation in Australia: overview', *Practical law*, Thomson Reuter 2020, 37. https://uk.practicallaw.thomsonreuters.com/3-621-6969?transitionType=Default&contextData=(sc.Default)&firstPage=true.

[57] Owen J and Currey R, 'Patents 2021', *International Comparative Legal Guides* 11th ed, Global Legal Group, 1.30. https://www.twobirds.com/~/media/pdfs/brochures/intellectual-property/international-comparative-legal-guide.pdf?la=en&hash=E139164B621614998BEA45048836B7AC62001B08.

In relation to streamlining the process in Australia, obviously the federal court judges who hear IP matters, and patent matters in particular, have been interested in trying to arrive at case management techniques that are designed to make cases run faster and to reduce the number of issues that need to go to trial – with greater or lesser success. … But there are nonetheless constraints. Particularly amongst the matters that are the bread and butter of the Federal Court, because very often they tend to be matters that are hard fought between large organisations that are also fighting this battle on corresponding patents in other jurisdictions as well. The instructions to the lawyers are to take all reasonable points. And the system has to be geared to enable that to occur. And it's very hard to fit a small and streamlined case into this system that also has to be engineered to deal with the biggest of the cases.

I totally agree that we need an alternative or parallel or some other jurisdiction or mechanism for determining probably what is the majority of disputes in relation to patents – which are not that complex. … even in the Federal Court we're working – including with the judges – to try and streamline those. But still that type of litigation, no matter how streamlined, is still going to be out of reach of most small businesses. So we have to be able to cater for them.

It is not surprising that the SMEs we spoke to still fear that they will be unable to afford to enforce their patents, despite the changes to the Federal Court's practice note. More needs to be done if they are to effectively enforce their patents.

It should be noted that, in the course of this review, we did consult a number of judges and former judges in the IP area and as a result gained a much better understanding of the issues – though it should be noted that they are not ultimately responsible for the suggestions made here.

(i) The courts

The UK Intellectual Property Enterprise Court (IPEC) was founded under another name in 1990, under the law of England and Wales, in order to provide an accelerated and less costly hearing for intellectual property (IP) disputes. It has undergone several changes and a

significant review: in 2010 procedural rules were introduced involving more streamlined time frames and caps on fees. In 2013 the original Patent County Court (PCC) became known as the IPEC, and it became part of the High Court. Cases are often transferred from the IPEC to the High Court and vice versa. It was reviewed in 2015, and an analysis of the success of the court has been given by Justice Colin Birss, in a lecture cited in the bibliography.

The IPEC is generally regarded as a success, and its name tells the story: the expedited and low-cost litigation offered by the court, including its small claims track, is seen as integral to the enterprise culture of Britain.

Patent litigation in Australia is expensive. At the time of the PC inquiry in 2016, estimates of the minimum cost of a simple patent case were in the $200,000 to $500,000 range,[58] whilst estimates of more complex cases can exceed $1,000,000.[59] Litigation costs have not decreased in the years since the PC's review. One recent source from June 2020 says that costs 'are likely to exceed' half a million dollars,[60] while a 2021 guide gives a range between $600,000 and $2.5 million.[61] These costs comprise Court fees, professional services fees and other disbursements.

If we are serious about placing IP rights at the heart of our own enterprise culture, we will seek a quicker and cheaper way of solving IP disputes, in particular for the SME community. IP rights are potential rights, which have to be established by administrative procedures, and it is not appropriate for the procedures to be allowed to become insurmountable.

A detailed description of the operation of the IPEC may be found in **Appendix E**. In broad terms the court operates along the following lines, which could be broadly replicated in an Australian court:

1. All IP cases, including patents, may be heard.
2. There is a two-track system, one involving small claims (including other matters involving trade marks or designs for example) and the other, the multitrack system, is for more complicated matters such as patent issues.
3. The emphasis is on speedy resolution, but this requires substantial preparation in advance of the hearing, referred to as 'active case management' (ACM). Trials usually last no more than two, or three days at the most.

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[58] Productivity Commission (PC), *Intellectual Property Arrangements*, Inquiry Report *No. 78*, p 561, PC, Australian Government, 2016.

[59] M Summerfield, 'Patent Litigation Insurance – What Is It, and Should You Have It?', *Patentology blog*, 7 August 2016, accessed 15 December 2020.

https://blog.patentology.com.au/2016/08/patent-litigation-insurance-what-is-it.html.

[60] Lee et al., 'Patent litigation in Australia: overview', *Practical law*, Thomson Reuter 2020, 37. https://uk.practicallaw.thomsonreuters.com/3-621-6969?transitionType=Default&contextData=(sc.Default)&firstPage=true.

[61] Owen J and Currey R, 'Patents 2021', *International Comparative Legal Guides* 11th ed, Global Legal Group, 1.30. https://www.twobirds.com/~/media/pdfs/brochures/intellectual-property/international-comparative-legal-guide.pdf?la=en&hash=E139164B621614998BEA45048836B7AC62001B08.

4. Court fees are low, matching the extent of the claim. For example the fee for a simple injunction is £528.
5. Remedies available are similar to those available in the High Court.
6. Parties may self-represent, but are usually represented by a barrister or solicitor and, importantly, they may be represented by a patent attorney, or a trade mark attorney, which would be a useful innovation for us.
7. There is a cap on damages (£500,000) along with the caps on costs that can be awarded against a party (£50,000).

Further information is given in **Appendix E** about the great increase in the number of litigants since the reforms. From 2007 to 2010 (largely prior to the reforms) the average annual patent case count was 6.5. Between 2011 and 2013 the average annual patent case count increased to 23.3.[62] It is noteworthy that this is regarded as one of the successes of the IPEC, and while 'the man in the street' might be appalled at the idea of more litigation, the increased number of users means that the IP system is being seen as more accessible and user-friendly. This is the kind of outcome we want for Australia: people coming into the patent system because they are no longer intimidated by it.

It is noted that decisions arising from such a court – were a broadly similar structure to be introduced into the Federal Court of Australia (FCA) – would be subject to appeal, and more complicated and expensive litigation could still be undertaken through the existing Court process if necessary. But trouble-free alternatives which are quick and inexpensive must be set up for those who want a simple process of clarification.

The Federal Court has substantial expertise that allows it to produce respected judgments in more complex patent cases. There is the opportunity to enlist the Federal Court's expertise in patent cases to provide an additional stream for smaller businesses to have their patent disputes resolved at a reasonable cost. The exact name for this stream – whether it is called a 'list', a 'fast-track' or some other name – is less important than that it should be available and be known to be available. Knowing that such a stream is there if they need it will give small business more confidence to use the patent system to protect their innovations.

[62] Helmers et al., *Evaluation of the Reforms of the Intellectual Property Enterprise Court 2010–2013*, report to the IP Office, UK Government, 2015, p 17. https://openaccess.city.ac.uk/id/eprint/12600/1/Evaluation_of_the_Reforms_of_the_Intellectual_Property_Enterprise_Court_2010-2013.pdf.

Recommendation 9:

That the intellectual property practice of the Federal Court of Australia be enabled to provide a stream for smaller disputes along the general lines of the Intellectual Property Enterprise Court of the UK, in order to provide at least one avenue for expedited and inexpensive trial processes. It is noted that IP Australia has agreed that it may be possible for it to facilitate funding for the new arrangements in accordance with the government's cost-recovery policy.

(ii) Ancillary steps

The following additional steps could be taken to encourage more use of the patent system.

(a) Limiting the grounds for appeal

There is an opposition phase within the patent application process, and this enables a thorough investigation of opposing patent claims. This is a feature of the Australian system and is unusual. It does contribute to a sound patent. However, a legal action such as an appeal can start again, bringing up new grounds and simply rerun the whole patent examination process, thus leading to a long-drawn-out case, as exemplified in the passage from Justice Beach above.

One small step can be taken to reduce the complexity brought about by the ability to test any area of the patent's validity by raising new grounds or adducing new evidence that was not considered at examination or opposition (re-hearings *de novo*). This is one cause of the length and costs of such appeals.

Provision could be made for a requirement to seek leave of the judge, if a party wishes to raise new grounds or adduce new evidence which were not before the Commissioner in the original opposition process. In other words, appeals would be restricted to the facts and the grounds available to the Commissioner in the original decision and, if new matters are sought to be raised, the judge's agreement would be required.

Such a provision may reduce the complexity of the appeals process, limiting the options except to be explored unless otherwise agreed by the judge. This may also reduce the workload of the Court.

Recommendation 10:

That legislation be enacted such that if a party wishes to appeal a patent opposition, this appeal must be based on the facts and grounds originally available to the Commissioner of Patents, with new grounds being admitted only with the leave of the Court.

This recommendation is one step in limiting the complexity of patent litigation, but it is clear that a quick and affordable legal solution is needed for some litigants – in particular for those from the SME business sector. We have examples both in Britain and Germany of attempts at speedy and affordable dispute resolution for IP matters.[63] Israel, whose success in building an IP-based enterprise culture is well-known, stresses the use of alternative dispute resolution.[64]

Such measures are deemed to be crucial to the defence and development of an innovative business culture in those countries. And that should be our goal. We should not allow the small business sector to be defenceless when pitted against a highly resourced opponent who is willing to use the law to exhaust the opposition.

Many of our SMEs have international operations and might run into validity or infringement problems in other countries or jurisdictions. To help solve those problems we can join with international organisations to facilitate quick and simple solutions, aiming to play a part in organisations such as the World Intellectual Property Organisation (WIPO), as the WIPO does offer an arbitration service for the international sphere (see footnote below).[65]

[63] See Appendix E.

[64] Israel Patent Office, *WIPO Mediation for IP and Technology Disputes,* Israel Ministry of Justice website, n.d., accessed 11 January 2021. https://www.justice.gov.il/En/Units/ILPO/Cooperation/Pages/Wipo-Mediation.aspx.

[65] WIPO, *WIPO Arbitration and Mediation Center,* WIPO website, n.d., accessed 18 December 2020.

https://www.wipo.int/amc/en/center/background.html.

(b) Non-binding expert opinion

The non-binding expert opinion: this is not expert determination, which is used in some jurisdictions, but rather an advisory service which seeks simply to provide an opinion on the legal position of the enquirer, based on the facts supplied. In the British system this is available at a token charge of £200 pounds but is said to be very useful in dispelling conflict,[66] and in preventing highly priced litigation.[67] The UK system received an average of 26.7 requests each year since 2017 (see Appendix E for more information). Opinions are seen to offer many advantages to businesses in the UK, with many UK lawyers promoting the speed and low cost of the service.[68]

IP Australia could undertake this responsibility as part of its advice-giving role, setting a reasonable fee designed to make the opinion service accessible to small and medium businesses, involving outside professionals such as patent attorneys as it sees fit.[69] Such a service could well complement the Case Manager service which is at present being trialled, even though the expert opinion may come at a different stage.

Recommendation 11:

That IP Australia set up and actively promote a non-binding expert opinion service, at a cost which is not prohibitive but consistent with its mission as a full cost-recovery agency.

[66] Andrews, T et al, *The UK's flexible system of patent disputes*, Managing IP website, accessed 17 February 2021. https://www.managingip.com/article/b1kbpk8yxs1192/the-uks-flexible-system-for-patent-disputes.

[67] We are aware of only two cases where reviews of UKIPO opinions were directly challenged in court: *DLP Ltd, Re UK Intellectual Property Office Decision* [2007] EWHC 2669 (Pat) and *Cunningham v Nokia Corporation* [2008] EWHC 1174 (Ch). In both cases the court refused to overturn the UKIPO opinion.

[68] Mewburn Ellis. *Validity & infringement opinions from UKIPO*, Mewburn Ellis website, accessed 17 February 2021. https://www.mewburn.com/law-practice-library/validity-infringement-opinions-from-the-ukipo. Boult Wade Tennant, *Insights: UKIPO opinions service*, Boult Wade Tennant website, accessed 17 February 2021. https://www.boult.com/bulletins/ukipo-opinions-service/. David Pearce, *UK Patent Office Opinions – A good way to get bad patents revoked?*, Barker Brettell website, accessed 17 February 2021, https://www.barkerbrettell.co.uk/uk-patent-office-questions/.

[69] Noting that sections 201 and 201A of the *Patents Act 1990* broadly limit the giving of advice about infringement and invalidity to patent attorneys and lawyers.

(c) Arbitration

Arbitration is a procedure in which a dispute is submitted, by agreement of the parties, to one or more arbitrators who make a binding decision on the dispute. In choosing arbitration, the parties opt for a private dispute resolution procedure instead of going to court.[70]

Despite its widespread acceptance in most areas of commercial law, there are some court cases which raise doubt over whether disputes concerning patent validity are arbitrable.[71] There is a broader public interest in the grant of patents. For this reason, the question of whether to grant or revoke a patent is reserved for the Commissioner of Patents or a court.

However, we were told that in practice this was not an issue. Parties seeking to arbitrate will ensure that their arbitral agreement only binds the parties, and does not attempt to bind the Commissioner or the courts.[72] Furthermore, if any doubt remains that patent disputes were arbitrable, this could be fixed with a legislative amendment.[73]

An arbitration service should be managed at arm's length by IP Australia. That is, IP Australia should provide the facilities, rules and administrative support for arbitrations. However, the actual arbitrations should be conducted by independent arbitrators, not by IP Australia staff. The arbitration should operate swiftly and inexpensively. Its aim should be to provide a focal point for the small and medium business community, so that it becomes clear that differences of opinion and legal conflict can be settled quickly and without requiring inordinately high expenditure. One of the purposes of establishing such a service is to send a message to the community and, for this reason, communication and marketing of the service is an essential part of the initiative. Active communication will be necessary if the intention is to reassure the SME community that the patent system is usable.[74]

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[70] IP Australia, 'Alternative dispute resolution', *IP infringement,* IP Australia website, 2019, accessed 8 January 2021.

https://www.ipaustralia.gov.au/ip-infringement/enforcing-your-ip/resolution-methods.

[71] *Comandate Marine Corp v Pan Australia Shipping Pty Ltd* [2006] FCAFC 192, [200]; *Larkden Pty Limited v Lloyd Energy Systems Pty Limited* [2011] NSWSC 268, [63] – [64].

[72] For example, the patentee may allege infringement and the other party alleges that the patent is invalid (and so cannot be infringed). If the arbitrator finds that the patent is invalid, the arbitral award would not purport to bind the Commissioner or a court to revoke the patent. It would not require the patentee to surrender the patent. It would also not prohibit the other party from later challenging the validity of the patent in proceedings before the Commissioner or a court. Rather the consequence would be that no compensation would be awarded to the patentee and they would be prohibited from bringing future patent infringement proceedings against the other party for the relevant conduct.

[73] In 1982 the US made a similar amendment to their patent law to confirm that patent disputes were arbitrable. See 35 U.S. Code § 294.

[74] It is noted that the Australian Small Business and Family Enterprise Ombudsman is working on the issue of dispute resolution, at a reasonable cost, it will be necessary to work with this office in this matter. Although it is considered that IP disputes are very specialised and different in character to other small business disputes. https://www.asbfeo.gov.au/news/news-articles/outdated-court-system-failing-small-businesses-ombudsman.

In relation to speed and cost, there is now widespread interest in the international community in trouble-free resolution of patent disputes. Most parties (but not all) genuinely want clarity and want to dispel doubt over the infringement or validity issues which confront them.

Arbitration will often be tailored to the interests of the parties and their capacity to agree, and will sometimes have the character of a commercial settlement. For this reason, arbitration has its limitations – in that the decision is only binding on the parties to the dispute. Nevertheless, the mere existence of a quick and decisive way of settling a dispute should help create a more user-friendly IP culture for SMEs.

Recommendation 12:

That IP Australia set up an arbitration service designed to settle patent disputes quickly and at low cost.

With regard to international issues, the World Intellectual Property Organization (WIPO) does offer an arbitration service which can hear both national and international disputes. Australia should develop its cooperation with WIPO and take steps to promote and facilitate its arbitration service being offered in Australia, in association with IP Australia. The WIPO arbitration service is described at this website.[75]

It also places an emphasis on speed and limited expense. If the WIPO service were used in Australia, it may encourage a further degree of internationalisation of Australian patents, which in all likelihood is sorely needed. This could be a small step in encouraging the export of Australian IP. And there is no problem about IP Australia offering a similar service: the two can compete.

Recommendation 13:

That IP Australia seek to cooperate with the World Intellectual Property Organization (WIPO) in facilitating the possibility of WIPO arbitration in Australia for parties with transnational patent issues, or who seek an arbitration of known international standing.

[75] WIPO, 'Arbitration', *IP Services*, WIPO website, n.d., accessed 8 January 2021. https://www.wipo.int/amc/en/arbitration/what-is-arb.html.

Recommendation 14:

That IP Australia add to its model contract in the IP toolkit a recommendation that parties agree to a dispute resolution method, possibly including an option to adopt the IP Australia arbitration process or the World Intellectual Property Organisation arbitration process, should these two possibilities be established.

17 Government commercial intervention

(i) Research and Development Tax Incentive Scheme

The review considered a variety of suggestions from respondents about government subsidy for the patent process, including comments on recent changes to the Research and Development Tax Incentive (RDTI).

A 2016 review of the RDTI found that the definition of 'eligible R&D' was fit for purpose and aligned with international best practice: the Australian Government accepted this recommendation and no change was made to the definition at that time. More recently, in consideration of the impacts of COVID-19 on business investment in R&D, the government again considered the RDTI scheme and legislated enhanced reforms through the *Treasury Laws Amendment (A Plan for the COVID19 Economic Recovery) Act 2020*.

These changes to the RDTI Scheme were frequently mentioned by respondents,[76] and one regularly repeated call was for the expenses involved in patenting – both the IP Australia fees and associated professional fees of patent attorneys or lawyers who had worked on the filing – to be included in the list of expenses considered eligible for the RDTI offset.

The review did not consider this proposed change because, in its view, including patenting expenses as an eligible activity or expense under the RDTI would not align with the objectives of the scheme, which are to:

- encourage the discovery of hitherto unknown scientific facts
- encourage companies to invest in R&D activities that they would not otherwise consider, and that are likely to deliver spillover benefits to the broader economy.

As such, the program seeks to support R&D activities *whose outcome cannot be known or determined in advance on the basis of current knowledge*, and could only be determined by applying a systematic progression of work. Because the activity of filing a patent application and incurring associated costs comes at a later stage, when matters are already known and understood, it falls outside the RDTI as presently conceived.

Although the suggested change falls outside the scope of the RDTI, the review does consider that the concept of supporting SMEs with the costs of patenting their discoveries by other means would be eminently reasonable for a country seeking to develop a modern manufacturing industry.

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[76] DISER, *Research and Development Tax Incentive: offset your R&D costs to help innovate and grow your business*, DISER website, 2020, accessed 8 January 2021. https://business.gov.au/Grants-and-Programs/Research-and-Development-Tax-Incentive.

It also notes that patent and associated costs are dealt with under two existing government programs, as discussed below:

- **Entrepreneurs' Programme: Accelerating Commercialisation Grants**[77]

This grant opportunity provides financial assistance to help small and medium businesses, entrepreneurs and researchers commercialise novel products, processes and services. The grant amount will be up to 50 per cent of eligible project costs up to the maximum grant limit, with progress payments made in advance.

Eligible activities must be directly related to commercialisation of a novel offering and can include professional costs to develop an intellectual property (IP) strategy; reasonable costs to protect IP, such as IP insurance; and other costs to obtain and maintain a patent. The cost of defending IP rights is not eligible.[78]

- **Export Market Development Grants (EMDG) scheme**[79]

This scheme is designed to encourage Australian SMEs to increase international marketing and promotion expenditure. Eligible exporters are reimbursed up to 50 per cent of eligible export promotion expenses, up to a maximum of $150,000.

Eligible expenditure can include third party costs to obtain and extend eligible IP rights in another country and IP insurance costs to protect eligible IP rights in another country.[80] Businesses cannot claim for costs associated with defending their IP rights.[81] However, eligible expenditure may change under new rules being developed in light of the recent passing of the *Export Market Development Grants Legislation Amendment Act 2020*.[82]

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[77] DISER, *Accelerating Commercialisation: Expert advice and funding on how to take your innovation to market,* DISER website, 2020, accessed 15 December 2020. https://www.business.gov.au/grants-and-programs/accelerating-commercialisation.

[78] For further details on the terms and conditions, see DISER, *Accelerating Commercialisation Grant Opportunity Guidelines*, DISER, 2020, accessed 15 December 2020.

[79] Austrade Trade and Investment Commission (Austrade), *Export Market Development Grants,* Austrade website, 2021, accessed 8 January 2021. https://www.austrade.gov.au/Australian/Export/Export-Grants.

[80] Claims can be made for countries other than Australia, North Korea and New Zealand. See Austrade, 'Steps to follow', *Export Market Development Grants,* Austrade website, 2021, accessed 8 January 2021. https://www.austrade.gov.au/Australian/Export/Export-Grants/Apply/steps-to-follow.

[81] For further details on the terms and conditions, see Austrade, *Export Market Development Grants – A Guide to Applying*, Austrade website, August 2020, accessed 8 January 2021.

https://www.austrade.gov.au/ArticleDocuments/1433/EMDG-A-Guide-Applying.pdf.aspx.

[82] The draft Export Market Development Grants (EMDG) Rules 2020 do not include IP insurance, but retain registration, grant and extensions as eligible expenditure. See Austrade, *Exposure Draft Export Market Development Grants Rules 2020*, Austrade website, n.d., accessed 8 January 2021. https://www.austrade.gov.au/ArticleDocuments/10477/EMDG-rules-2020-exposure-draft.pdf.aspx.

(ii) Patent box

Some respondents referred to a preferential tax regime for innovative companies known as the 'patent box' approach – a tax incentive scheme which reduces the tax payable on income derived from intellectual property (particularly from patents). It is argued that the scheme would create an incentive for Australian companies to both:

- retain and commercialise patented inventions
- file patent applications for new inventions in Australia.

In Britain, companies with innovative content have a reduced rate corporate tax rate of 10%.[83] In France, new legislation in 2019 makes a similar tax concessions, with what appears to be an attractive feature of the French patent box regime – namely that licence fee revenue is taxed at a rate of only 10%.[84] This is much less than the normal company tax rate, and is part of a determined attempt by France to attract innovative companies into France.[85]

Finding 2:

The Australian Government's support for patenting and associated costs is adequate.

[83] UK Government, 'Guidance: Use the Patent Box to reduce your Corporation Tax on profits', *Corporation Tax,* gov.uk, 7 May 2020, accessed 8 January 2021.

https://www.gov.uk/guidance/corporation-tax-the-patent-box#:~:text=The%20Patent%20Box%20is%20designed,Corporation%20Tax%20which%20is%2010%25.

[84] KPMG, 'Enhanced patent box regime', *France: Corporate tax measures enacted for 2019,* KPMG website, 28 February 2019, accessed 8 January 2021.

https://home.kpmg/xx/en/home/insights/2019/02/tnf-france-corporate-tax-measures-enacted-for-2019.html#:~:text=The%20new%20French%20patent%20box,for%20small%20and%20medium%20size.

[85] For comparison, the standard corporate tax rate in the UK is 23% and the standard corporate tax rate in France is 33%.

18 A national commercialisation and patent defence fund

Patenting should lie within a commercialisation strategy, and commercialisation should start early. The low use of the patent system by Australian small to medium enterprises (SMEs) can only be addressed by comprehensive government activity, mobilising public and private resources, legal professionals, patent attorneys, venture capital funds and family offices.

Government and its private allies have to actively seek out inventions, even before the patent stage, and begin to invest or facilitate investment, along with offering coaching in strategy and intellectual property (IP) management. An invention may lead to the creation of an SME, which may grow. An involvement with the patent system may increase the capacity for companies to commercialise their products overseas.

This means actively going to institutions where there is limited commercialisation assistance, such as hospitals, small businesses and even universities, asking questions and seeking out information. Hospitals often have foundations which fund research of an applied kind, but there is little in the way of assistance for patenting or commercialisation of the findings. An invention in a hospital which is successfully commercialised will lead to another SME, and to more jobs at every level.

If such a group were established it might also ease the problem in universities, where commercialisation is often a difficulty, and where there is often a doubt as to whether the University will back it when litigation comes up. It may be easier for many universities, particularly regional universities, to outsource to such a body.

Government protection or facilitating of protection for patents of national importance, both in security and defence terms, but also in terms of national commercial growth, should also be considered. Too often Australian inventions depart overseas as the free market operates in its own best interests. There are numerous small inventors and small companies without significant wealth, and these generate ideas which are left to the mercy of the market and – in our open economy – to large investors from countries with deep capital markets. Malicious litigation can lead to inventions being swallowed up by big external companies.

Any such intervention by government would have to be structured so as to observe commitments given in trade agreements, and related legislation. The shape of the partnership would be partly determined by such considerations.

Venture capital owners – though funds have grown appreciably in the volume available – are tough to convince, and private funds and family offices are very choosy about what they invest in. There is nothing wrong with this, of course – since investors want a return, and they are not there simply to make a donation. But venture capital is not so much ‘risk capital’ as ‘risk minimisation capital’, because the investors’ criteria for success at certain

levels are defined within the very narrow confines of company solvency and investor return: this is why they are choosy.[86] A government fund may be able to take a larger view.

There is a need for coordination of public and private resources, because it will be in the interests of the Australian economy and of Australian employment growth to seek ways of keeping and nurturing such IP developments. Government coordination can assist in preserving and developing critical technologies as they are identified.

What is needed, in addition, is a pool of funds to support a program of this kind, and a business strategy for the partnership which envisages either full cost recovery or a profit. Not a great deal separates these two alternatives. Having a patent accepted by such a group should be treated as a matter of high prestige. Their stamp of approval should mobilise a response.

There is no need for this to be a new impost on the taxpayer. The starting point for investigating how to do this should be models from elsewhere, such as the Israeli model of government/private cooperation, or Canadian public/private partnerships such as the Canadian Regenerative Medicine Consortium which also operates in Australia and which is seeking opportunities, it should be noted.

There are therefore two main legs to this proposed public/private partnership:

- A commercialisation service, offering advice and mentoring ("curation") on how to develop commercial technology prospects discovered through prospective audit or other means, and funded on a fee for service basis. This service would use privately available commercialisation services, coordinated by government. The model would be a successful university commercialisation office of which there are several in Australia, that of the CSIRO, or that of the highly successful Imperial College London.
- A funding source, structured appropriately with respect to our trade obligations, which would couple private investment with government investment in an appropriate form, with parties on both sides agreeing to the investment and working together on it. This would involve a selection process, not an application process bound by rules, which would then lead to expensive litigation.

Funds may be available from the Significant Investor Visa Scheme, which already provides for funds to be invested in start-ups and emerging companies. A national commercialisation partnership could easily satisfy the present rules. It may be that the new Australian Business Growth Fund, in which the Australian Government is an investor,[87] could treat such a program as a division of its own activities (though at present its rules provide

[86] M Mazzucato, *The entrepreneurial state: debunking public vs. private sector myths*, US edn, Public Affairs, 2018, p 68.

[87] *Australian Business Growth Fund (Coronavirus Economic Response Package) Act 2020*.

for businesses which already have some degree of market success.[88]) Alternatively, funding for such a direct action group could be offset with savings from the reduction in the benefits provided under the RDTI.

This would involve choosing inventive areas for funding and development, but the mission of the MMI is taking us in that direction, and to a certain extent the government does a lot of choosing already. The RDTI approach is different to this: essentially it spends several billion dollars on trust and leaves it to the market.

A board of experts drawn from the commercial world, familiar with start-up issues, set up by the Australian government but operating semi-independently, should be charged with this responsibility. Talent scouts should be employed, as they are in sports and other industries. The way R&D is supported in Australia should be completely reconceived along these lines.

Recommendation 15:

That the Australian Government should investigate the possibility of setting up a national commercialisation and patent defence fund, with a view to seeking out and protecting Australian inventions deemed to be in the national interest – whether in terms of national security or commercial development – and seeing them through to a successful commercialisation.

[88] The Hon Josh Frydenberg MP [Treasurer], *Launch of the Australian Business Growth Fund* [media release], Australian Government, 16 October 2020, accessed 15 December 2020. https://ministers.treasury.gov.au/ministers/josh-frydenberg-2018/media-releases/launch-australian-business-growth-fund.

19 IP insurance

A number of parties raised the question of whether litigation insurance could be set up at a reasonable price in order to allay fears over the possibility of very expensive litigation involved with the patent system. The European Union has taken an interest in this issue and is actively exploring it.[89]

At the moment the open-endedness of patent litigation no doubt makes it very hard for an insurance company to enter the market with a useful product, though IP Australia does explain the nature of intellectual property (IP) insurance on its website.[90] But where there are capped costs, and a known maximum expenditure, it may be much easier for insurers to plan a product which provides cover up to a certain level, for certain kinds of processes, such as arbitrations, or even a truncated Federal Court of Australia (FCA) process.

Estimates of the annual premiums (as a percentage of the total insured amount) for patent enforcement insurance range from just under 1% to 1.5% at the lower end,[91] and between 2% and 5% at the higher end.[92] There is usually also a co-payment of between 15% and 25% of the total actually spent.[93]

If and when these changes to court processes – and the introduction of arbitration services – are implemented, then it may be possible to interest more insurance companies in such products. In the meantime, the activities of the European Union in the insurance area should be closely monitored.

Finding 3:

The implementation of the legal and alternative dispute resolution steps advocated in this review may well lead to litigation insurance becoming a viable option.

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[89] European Commission, *Putting intellectual property at the service of SMEs to foster innovation and growth* [Commission Staff Working Document], SWD(2016)373/F1, 23 November 2016, pp 7–8. https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52016SC0373.

[90] IP Australia, 'IP Insurance', *IP infringement,* IP Australia website, 2018, accessed 15 December 2020. https://www.ipaustralia.gov.au/ip-infringement/more-about-ip-infringement/ip-insurance.

[91] UK Government, 'Guidance: Intellectual property insurance', *Copyrights,* gov.uk, 21 February 2020, accessed 8 January 2021. https://www.gov.uk/guidance/intellectual-property-insurance; Spruson and Ferguson Patent and Trade Mark Attorneys, *Biotechnology intellectual property manual,* report to Biotechnology Australia, Australian Government, Spruson and Ferguson, 2001.

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[92] CPR Insurance Services, *Patent Insurance,* CPR Insurance Services website, n.d., accessed 8 January 2021. http://www.professionalrisk.com.au/pages/types-of-cover/patent-insurance.php.

[93] As above.

20 Hidden potential and the 'Flying Squad' approach

This reviewer once had the experience of being invited to review the engineering department of a small regional university: there was a lot of excitement and inventive activity in the group, and a strong sense of teamwork. A significant patent attorney firm from Sydney agreed to send a patent attorney (with a mechanical engineering background) to check out the possibilities. She reported that there were nine patentable inventions arising out of the work of the department, and also that there was no awareness of this on the part of the staff.

Universities are complex organisations and there were many reasons for the inactivity over these inventions, but that is another matter. It is sufficient to note that, in the course of their ordinary work, this university department had created a number of inventions, but had not developed them.

How many times could this situation be repeated in Australia's 43 universities? Or engineering businesses, or mining companies, or mining suppliers? Or in agribusiness? Is there a general understanding of what is patentable and what is not? How many researchers have invented something, without knowing that it is 'an invention' in terms of the *Patents Act 1990*? How much would be discovered if a patent attorney were to venture into various university departments, or small companies, and ask to look at the research being carried out?

We might term this a **prospective intellectual property (IP) audit**,[94] whereby a patent attorney is invited not simply to talk to the staff but – with their help – to actively investigate the research being carried out.

- This audit would be carried out with a view to actually finding a patentable product, and would come about *as a result of seeking it*.
- This is not about simply doing a presentation, but is more forensic.

Patent attorney firms may be willing to cooperate with this activity on a *pro bono* basis, since they may be able to develop new business from the process.

The universities are an obvious target for prospective IP audit, since they house so much research, often funded by government, but there are other repositories of applied knowledge. The hidden inventiveness in hospitals and clinical services has already been mentioned, together with the problem that commercialisation and IP advice is not readily accessible to clinicians who, outside the actual practice of healthcare, invent technologies or

[94] IP Australia, 'Auditing your IP', *Understanding IP,* IP Australia website, 2016, accessed 8 January 2021. https://www.ipaustralia.gov.au/understanding-ip/getting-started-ip/auditing-your-ip.

processes which may actually improve health care. These inventions should, of course, then be housed in new SMEs.

When an invention emerges in an organisation it mostly leads to a spinout, or a new small business. This is because the mission and strategy of the parent organisation typically does not cater for new expenditure on prototypes, manufacturing, IP costs and so on: 'Stick to your knitting' is often the motto when something new comes up.

Again, this is a question of seeking out: seeking out those with products to offer and who need to be helped there and then, *in situ*. We might call this the 'flying squad approach': as might be recalled, the flying squad was invented by Scotland Yard who decided to seek out the criminals, rather than waiting for them to turn up: they sent out carriages with holes in the carriage roof enabling observation of criminals and pick-pockets, and in this way they found them. We need to seek out inventors using the flying squad approach: not waiting until inventors turn up, but going out looking for them. (It is well known that, in order to find, one has to seek.[95])

Of course, businesses or other organisations will need to accept such intervention if the 'flying squad' approach is to work.

Recommendation 16:

That the Australian Government use an opt-in, activist model in seeking out small business inventions which are in need of commercialisation and patenting advice.

[95] Matthew 7:7, Holy Bible: English Standard Version.

Appendix A – Issues outside the scope of this review

During the course of the interviews and written submissions, some stakeholders raised issues that fall outside the scope of the review's terms of reference. These issues are summarised below for completeness.

Second-tier patent system

The legislation requiring this review also included amendments to phase out Australia's current second-tier patent system, the innovation patent. While some in the legal and attorney professions expressed regret, most accepted that the innovation patent would be phased out.

However, some stakeholders in the attorney and legal professions, and a few businesses suggested that it should be replaced with a new type of second tier patent, which would differ from the innovation patent in the respects where perceived to be problematic. None of these appeared to provide any new information or arguments that had not been raised by previous reviews of the innovation patent system, including previous consideration of whether the innovation patent should be reformed instead of abolished.

Appendix B – List of respondents

The independent reviewer and the review secretariat wish to thank all stakeholders who contributed to the review either by participating in interviews, making written submission or both. All stakeholders who contributed – apart from those that requested confidentiality – are listed below.

List of interviewees

Adrian Paterson

Alistair Matthew Cumming – Gretals Australia

Andrew Christie – University of Melbourne

Andrew Hunt – Safran Electronics and Defense Australasia

Ben Mullaney – InQuik Bridging Systems

Brad McCusker – SURROUND Australia

Brendan Cheong – Rio Tinto

Cassandra Budd – Sweet Potatoes Australia

Castaly Haddon – Council of Small Business Organisations Australia

Dale Coleman – TTG Transportation Technology

David Cain – Business Australia

Craig Latham – Australian Small Business and Family Enterprise Ombudsman

Erin Rayment – Knowledge Commercialisation Australasia

Geoff Maloney – POD Active Pty Ltd

Geoff Thomas – Axant

Geoffrey Bell – Microbiogen Pty Ltd

Glenn Dale – Tree Crop Technologies Pty Ltd, trading as Verterra

Grant Shoebridge – Pearce IP

Guenter Hauber-Davidson – WaterGroup

Hayley Mcgillivray – CSIRO

James Douglas – Carbon Revolution Ltd

James Kane – Two Bulls

Jamie Selby-Pham – Nutrifield

Jeff Bergmann – Solubility Pty Ltd

Jeremy Barker – AusIndustry

John Gibbs – Patents AU Pty Ltd

John Lee – Gilbert + Tobin

Kimberlee Weatherall – The University of Sydney

Kirsten Kiel-Chisholm – Translational Research Institute

Lee Hellen – Monitum Pty Ltd

Luke Mitchell – Coastal Energy

Marie Felsbourg – Astral Consulting Services p/l

Mark Runnalls – NewCo Holdings (Australia) Pty Ltd

Mark Summerfield

Matthew Swinn – Law Council of Australia

Michael Caine – Institute of Patent and Trade Mark Attorneys (IPTA)

Michael Dalton – Australian Bay Lobster Producers Ltd

Michelle Richards – Translational Research Institute

Paul Bridgeford – Pamco

Paul Myers – Caravel Group Pty Limited

Peter Franke – International Association for the Protection of Intellectual Property (AIPPI)

Peter Gretton – Licensing Executives Society of Australia and New Zealand

Peter Jenkins – Jenkins Engineering Defence Systems Pty Ltd

Peter Milic – CSIRO

Peter Strong – Council of Small Business Organisations Australia

Phil Morle – Main Sequence Ventures

Robert Coorey – Geospatial Intelligence Pty Ltd

Rohan Wallace – Golja Haines & Friend

Scott Bell – Translational Research Institute

Shane Mitchell – The Product Makers

Stephen Krouzecky – International Federation of Intellectual Property Attorneys (FICPI) Australia / Krouzer IP

Stephen Richter – SJ Cheesman

Terence Polkinghorn – ITECplace

Tim Boyle – Australia's Nuclear Science and Technology Organisation (ANSTO)

Tom Dobbie – Targus

William Hill – Gyder Surgical

William Mcfarlane – Madderns Pty Ltd

Note that a number of judges were interviewed but for reasons of discretion their names have been withheld.

List of submitters

AusBiotech

Clean Energy and Water Technologies

Davies Collison Cave Pty Ltd

Flinders University

Glidestore Freetrack Pty Ltd

Hartman Group

Institute of Patent and Trade Mark Attorneys of Australia

Intellectual Assets Owners Group of Australia

K.T.C.

LTCM

Macquarie University

Menios Sfetsos

Phillips Ormonde Fitzpatrick

One World LED

SiteSee

University of Newcastle

University of Southern Queensland

University of Tasmania

UNSW Sydney

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Appendix D – Patent enforcement in Australia

Many patent enforcement disputes contain both infringement and invalidity issues. If they think that someone is trespassing on their patent rights, the patentee can sue them for patent infringement. However, if a patentee seeks to enforce their patent against a competitor, that competitor may counter that the patent is invalid and that it cannot be enforced.

The processes for resolving infringement and invalidity disputes are explained below.

Infringement

Patent infringement disputes may only be finally resolved by a court. To force an infringer to stop or to pay compensation, a patentee (or their exclusive licensee) must initiate civil litigation to enforce their patent.[96] There are no criminal penalties for patent infringement. Patents are not enforced by IP Australia or any other government body.

Patent infringement trials

A person may initiate patent infringement proceedings in the Federal Court of Australia (FCA), or a State or Territory Supreme Court.[97] Currently, the Federal Circuit Court (FCC) does not have jurisdiction to hear patent cases (though it can hear cases for other intellectual property (IP) rights).

Pre-trial procedures for patent infringement proceedings are much the same process as for other civil litigation cases:[98]

- Statement of claim filed by the patentee (or exclusive licensee)
- Defence filed by the alleged infringer
- Disclosure or discovery of relevant documents by each party
- Affidavits (written statements of evidence) filed by both parties.

If the case is not settled out of court by the parties it proceeds to trial, where both sides will present submissions and evidence, and test the evidence of the other side (for example, by cross-examination of witnesses). Given the technical nature of most patents, an important feature of patent litigation is often the heavy use of expert evidence from specialists in the relevant field of technology.

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[96] *Patents Act 1990*, s 120(1).

[97] *Patents Act 1990*, ss 120, 154 – 155 and Sch 1.

[98] IP Australia, 'Going to court', *IP Infringement,* IP Australia website, 2016, accessed 8 January 2021. https://www.ipaustralia.gov.au/ip-infringement/enforcing-your-ip/going-to-court/court-proceedings.

The majority of patent cases are heard by the FCA.[99]

The FCA has power to order parties to mediation or arbitration.[100] In 2018–19 the FCA referred between 35 and 42% of IP cases to mediation, compared with 10 to 15% of its overall cases.[101]

Patent infringement appeals

Appeals from trial judgments in patent cases are heard by the FCA.[102] Appeals are typically heard by a Full Court panel of 3 judges (and occasionally 5 judges). Appeal judgments from the Full Court of the FCA can be appealed to the High Court of Australia, but only with the special leave of the High Court.[103]

Remedies for patent infringement

A patentee who is successful in bringing a patent infringement claim may be granted an injunction (either preliminary or final). They may also be awarded damages or an account of profits (their choice).[104] Additional damages may be awarded in cases of flagrant infringement.[105]

Invalidity

Unlike infringement – which can only be determined by the courts – invalidity issues can be considered by both the courts and the Commissioner of Patents (within IP Australia). As mentioned above, invalidity may be asserted to counter a claim for infringement. This may be done pre-emptively (for example, ahead of a likely infringement claim) or reactively (for example, by cross-claiming for invalidity when sued for infringement). A claim of invalidity can also be challenged in a number of different ways – see diagram below.

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[99] While the FCC does not have jurisdiction to hear patent matters, the FCA in theory (at request of a party, or on own initiative) can transfer civil proceedings and the necessary jurisdiction to the FCC. See *Federal Court of Australia Act 1976*, s 32AB (8A).

[100] *Federal Court Rules 2011*, r 28.01.

[101] Federal Court of Australia, *Annual Report 2018–19* (Report, 6 September 2019) p 34.

https://www.fedcourt.gov.au/__data/assets/pdf_file/0005/59639/AR2018-19.pdf.

[102] *Patents Act 1990*, s 158(1).

[103] *Patents Act 1990*, s 158(3).

[104] *Patents Act 1990*, s 122(1).

[105] *Patents Act 1990*, s 122(1A).

Oppositions

'Oppositions' are contested proceedings, with both sides providing evidence and argument via a structured process before a formal hearing.[106] These occur after examination, but before a patent is granted. IP Australia has information on the opposition process, which was substantially reformed by the *Raising the Bar reforms* in 2012, which served to shorten oppositions and limit strategic delay.[107]

Appeals to FCA from oppositions

Either party can appeal to the FCA about a decision that IP Australia has made in relation to an opposition. These appeals are heard on a *de novo* basis. This means that either party is free to provide new evidence or argument that wasn't originally provided in the opposition.

Re-examination

This can happen after examination, and before or after grant of a patent. Although re-examination can be triggered at the request of a third party (who often provides information and reasons to support revoking the patent), the third party has no formal subsequent role. IP Australia may also initiate re-examination at any point after acceptance of a patent. The re-examination is conducted between the patentee and IP Australia. IP Australia has information on the re-examination process.[108]

Appeal to the FCA from re-examination

Re-examination decisions can only be appealed by the patentee: a third party has no explicit right of appeal. A third party may be able to challenge a re-examination decision via the *Administrative Decisions (Judicial Review) Act 1977*. However, in practice this is rare, as *de novo* review (which favours the party asserting invalidity) is available via a revocation action in the FCA.

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[106] *Patents Act 1990*, Ch 5. See also IPA, 'Opposing a patent', *Patents,* IPA website, 2016, accessed 8 January 2021. https://www.ipaustralia.gov.au/patents/managing-your-patent/enforcing-your-patent/opposing-a-patent. IPA, 'The Opposition Process', *Patents,* IPA website, 2016, accessed 8 January 2021. https://www.ipaustralia.gov.au/patents/managing-your-patent/enforcing-your-patent/opposition-process#:~:text=Opposition%20to%20the%20grant%20of,statement%20of%20grounds%20and%20particulars.

[107] See *Intellectual Property Laws Amendment (Raising the Bar) Act 2012*, sch 3; *Intellectual Property Legislation Amendment (Raising the Bar) Regulation 2013 (No. 1)*, sch 3.

[108] IP Australia, *Re-examination,* IP Australia website, 2016. https://www.ipaustralia.gov.au/patents/managing-your-patent/enforcing-your-patent/re-examination.

Revocation actions in the FCA

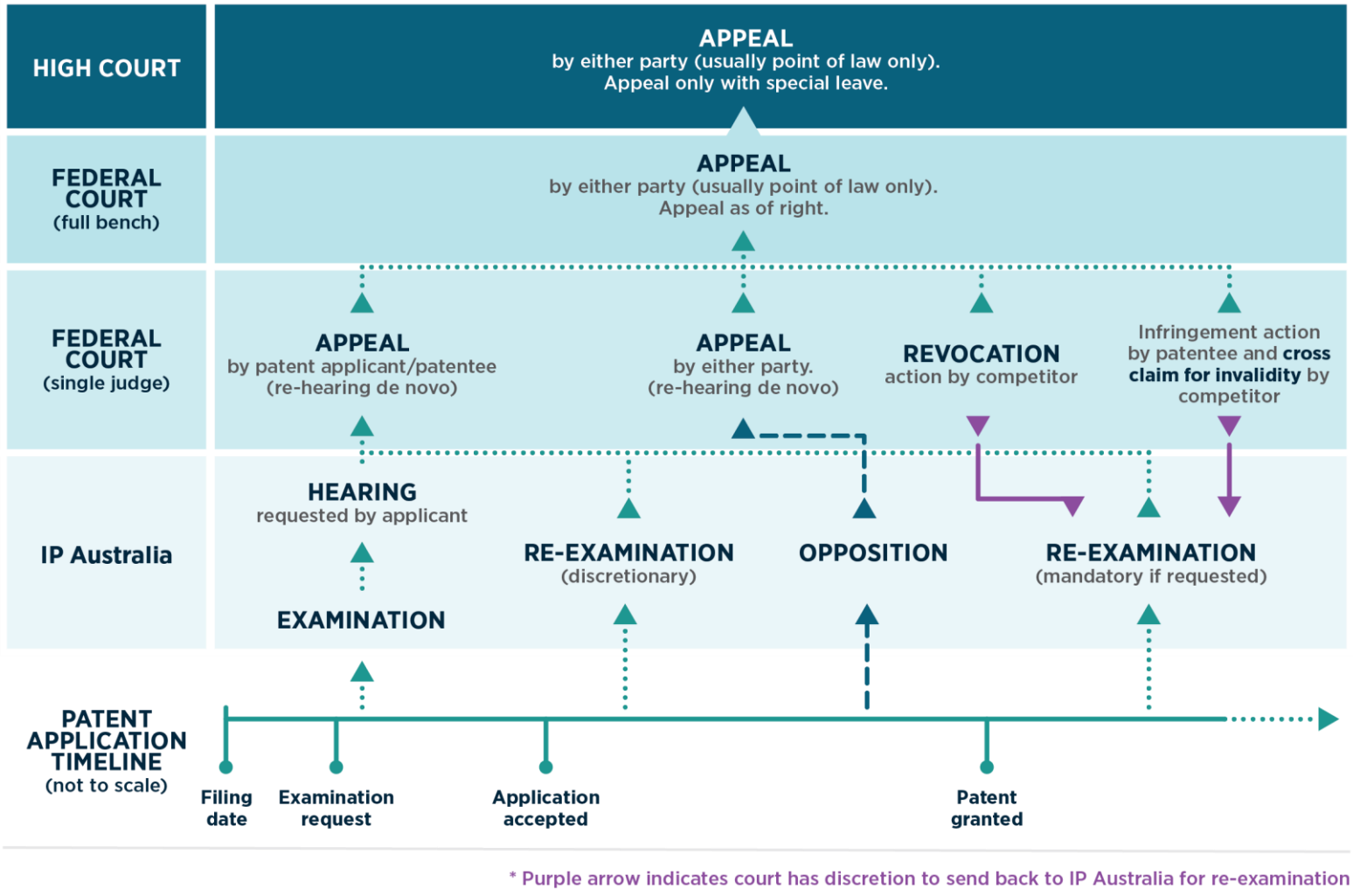
A third party can seek to have a granted patent revoked by the courts on the basis of invalidity. Again, this is on a *de novo* basis, as the court considers (from scratch) whether the patent should be revoked. This can happen after grant, and provides an opportunity for competitors to challenge a patent at any point in its term.

Cross-claim for invalidity in FCA infringement actions

If a third party is sued for infringement, they can counter claim that the patent is invalid and should be revoked. As above, the invalidity claim is considered on a *de novo* basis. The invalidity cross-claim proceeds on the same basis as a revocation proceedings, as described above. Importantly, this means that the party being accused of infringement may lead as much evidence as they want (within evidentiary rules) on the invalidity aspect, potentially increasing time and costs as the patentee responds.

A diagram of the main processes for considering invalidity is below.[109]

[109] Note that this excludes some less commonly used or subsidiary aspects of the system including: state and territory supreme court concurrent jurisdiction for revocation and infringement actions; procedural oppositions (eg opposing an extension of time); review of some procedural aspects of matters before IP Australia by the Administrative Appeals Tribunal (before going to the Federal Court); and entitlement disputes.



* Purple arrow indicates court has discretion to send back to IP Australia for re-examination

Appendix E – Overseas enforcement models

Different countries have a range of mechanisms to resolve patent disputes, both via courts and Alternative Dispute Resolution (ADR). Stakeholders have suggested four of these mechanisms that could serve as a model for potential reforms in Australia to reduce the costs and time needed to resolve patent disputes for small to medium enterprises (SMEs). These mechanisms are summarised below.

UK IPEC

The United Kingdom's Intellectual Property Enterprise Court (IPEC) is a specialist court designed to resolve smaller and less complex IP cases quickly and cheaply.[110] IPEC's predecessor the Patents County Court (PCC) was reformed to 'address longstanding concerns about the costs of IP litigation, particularly for SMEs' similar to issues that have been raised in the present review.[111] The renamed IPEC retained the key reforms to the former PCC.

Jurisdiction of IPEC

The IPEC handles all types of intellectual property (IP) cases, including patent cases.[112] This includes both claims for patent infringement, and claims that a patent is invalid.[113]

The IPEC has two tracks for disputes, a 'multi-track' and a 'small claims track'. The small claims track relates to simpler cases with lower levels of damages (less than £10,000).[114] Patent cases are not suitable for the small claims track, and must be pursued via the multi-track.[115]

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[110] The UK Judicial Office, *Intellectual Property Enterprise Court,* UK Judicial Office website, 2021, accessed 8 January 2021. https://www.judiciary.uk/you-and-the-judiciary/going-to-court/high-court/courts-of-the-chancery-division/intellectual-property-enterprise-court/.

See also HM Courts & Tribunal Service, *The Intellectual Property Enterprise Court guide*, UK Government, 2019, accessed 8 January 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/823201/intellectual-property-enterprise-guide.pdf.

[111] The Hon Justice Birss, 'To boldly reform IP dispute resolution', *Australian Intellectual Property Journal*, 2016, 27(1):6.

[112] HM Courts & Tribunal Service, *The Intellectual Property Enterprise Court guide*, UK Government, 2019, accessed 8 January 2021, p 4.

[113] As above, p 11.

[114] As above, p 3.

[115] As above, p 9.

Cases filed in the IPEC may be transferred to the Chancery Division of the UK High Court, and vice versa where appropriate. The key factors determine whether a case is suitable for IPEC are:[116]

- the financial resources of the parties
- the overall complexity of the claim
- the nature of the evidence
- the value of the claim.

Procedures in IPEC

While the IPEC has similar procedures to other courts in many respects – filing proceedings, serving a claim on the other party, response by the defendant, and statements of case – its processes are streamlined and are designed to ensure the matter is resolved as quickly and cheaply as possible.

Written pleadings are expected to fully set out the issues in greater detail at the start of the case (when compared with other courts). This has the effect of 'front-loading' the costs of litigation, so that later aspects of the case can be resolved more quickly and cheaply.[117]

Particular emphasis is placed on clearly defining the 'real' issues in the dispute early on, via the case management conference (CMC). Parties must identify the key issues of law and fact to be resolved at trial. Usually, the CMC is the 'first and last' opportunity for parties to obtain orders from the judge that they may lead evidence, require disclosure of documents, or make written submissions on a particular issue.[118] Such orders are only granted if they pass a cost/benefit test. 'This includes thinking about its probative value [of the requested evidence, disclosure or submission] as well as the proportionality of the cost to the value of the dispute overall.'[119]

[116] HM Courts & Tribunal Service, *The Intellectual Property Enterprise Court Guide*, UK Government, 2019, accessed 8 January 2021, p 8.

[117] The Hon Justice Birss, 'To boldly reform IP dispute resolution', *Australian Intellectual Property Journal*, 2016, 27(1):9.

[118] HM Courts & Tribunal Service, *The Intellectual Property Enterprise Court Guide*, UK Government, 2019, accessed 8 January 2021, pp 15–17.

[119] The Hon Justice Birss, 'To boldly reform IP dispute resolution', *Australian Intellectual Property Journal*, 2016, 27(1):9–10.

The CMC also sets the timetable for the stages up to the trial and the date for the trial.[120] Trials in the UK IPEC usually last no more than 2 days, or 3 days in very rare cases. Disputes where the parties are unable to conduct the trial within these timeframes are likely to be inappropriate for the IPEC.[121]

Fees and costs for IPEC

Official court fees depend on the value of the claim. For a £500,000 claim (the maximum in the IPEC), the IPEC claim fee would be £10,000, while an application for a non-money claim (for example, an injunction) would be £528. Counterclaims (for example, for invalidity in response to a patent infringement claim) attract similar fees. For cases that proceed to a hearing, the hearing fee is up to £335 for the Small Claims Track, and £1090 for the Multi Track. (Note that other fees may apply in certain circumstances.[122])

The losing party may have to pay the legal costs of the other party, usually in the order of 65 to 80% of their actual legal costs.[123] Importantly, the amount of costs that may be awarded is capped in the IPEC (with limited exceptions) to:

- £50,000 on the final determination of a claim
- £25,000 on an inquiry as to damages or account of profits.

Despite the cap of £50,000, most costs awards are below £40,000.[124]

Estimates of the actual legal costs incurred by a party in bringing a case to trial in the IPEC range from £50,000 to £150,000. By comparison, legal costs for litigation in the UK High Court typically range from £250,000 to £750,000.[125]

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[120] HM Courts & Tribunal Service, *The Intellectual Property Enterprise Court Guide*, UK Government, 2019, accessed 8 January 2021, p 16; The Hon Justice Birss, 'To boldly reform IP dispute resolution', *Australian Intellectual Property Journal*, 2016, 27(1):10.

[121] HM Courts & Tribunal Service, *The Intellectual Property Enterprise Court Guide*, UK Government, 2019, accessed 8 January 2021, p 8.

[122] HM Courts and Tribunals Service, *Civil and Family Court fees,* UK Government, 2020, accessed 8 January 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904862/ex50-eng.pdf.

[123] The Hon Justice Birss, 'To boldly reform IP dispute resolution', *Australian Intellectual Property Journal*, 2016, 27(1):13.

[124] Helmers et al., *Evaluation of the reforms of the Intellectual Property Enterprise Court 2010–2013*, report to the IP Office, UK Government, 2015, p 8.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/447710/Evaluation_of_the_Reforms_of_the_Intellectual_Property_Enterprise_Court_2010-2013.pdf.

[125] Clarke Willmott, 'Top 10 tips to reduce the cost of IP Litigation', *Clarke Willmott*, 27 January 2014, accessed 8 January 2021. https://www.clarkewillmott.com/news/top-10-tips-to-reduce-the-cost-of-ip-litigation/.

Remedies available in the IPEC

Successful parties in the IPEC have access to all the same remedies as available in the UK High Court, including:

- preliminary and final injunctions
- damages
- account of profits
- a range of ancillary orders.[126]

Representation before the IPEC

Parties may represent themselves, though they are usually encouraged to engage a professional representative. Parties are usually represented by a barrister or a solicitor.

Notably, parties may also be represented by patent and trade mark attorneys, unlike the cases in Australia where patent and trade mark attorneys have no automatic right to appear in court.[127]

Evaluation of IPEC

An evaluation of the UK IPEC was conducted in 2015.[128] The evaluation included both qualitative and quantitative findings.[129] The evaluation summarised the main insights from their qualitative findings:

- 'Legal practitioners are unanimous in their assessment that the ability of SMEs/individuals to gain access to justice has been greatly improved by the reforms.
- The costs cap (recoverable scale up to £50,000) and Active Case Management (ACM) by judges are clearly identified as the most important reforms.
- Regarding the costs cap, the benefit is that litigants know their potential exposure before initiating a claim; in practice, a costs award of less than £40,000 is commonly awarded to the winning party.
- Meanwhile, ACM clarifies and limits claims, greatly speeding up the process of litigation.
- The Small Claims Track is seen as a useful option, particularly for individuals and small enterprises that previously may not have attempted to litigate.

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[126] HM Courts & Tribunal Service, *The Intellectual Property Enterprise Court guide*, UK Government, 2019, accessed 8 January 2021, p 4.

[127] The Hon Justice Birss, 'To boldly reform IP dispute resolution', *Australian Intellectual Property Journal*, 2016, 27(1):14.

[128] Helmers et al., *Evaluation of the Reforms of the Intellectual Property Enterprise Court 2010–2013*, report to the IP Office, UK Government, 2015.

[129] As above, p 12.

- The damages cap (£500,000) is seen as relatively unimportant (in most cases the interim and/or final injunction is seen as the main goal for litigants).
- The reforms have opened up the IPEC Multi Track to a wider range of representatives – there has been greater participation by patent attorneys and trade mark attorneys, in addition to the continuing presence of solicitors and barristers.'

The quantitative analysis in the evaluation found that there was a substantial increase in case counts for all IP rights following the introduction of the costs cap and ACM. Importantly, 'the number of cases brought before the IPEC by SME claimants has increased significantly following the reforms.[130] The evaluation states that 'the reforms appear to have fundamentally altered the IP dispute landscape, and in doing so they have increased the likelihood that IP holders will attempt to uphold their rights against potential infringers.[131]

Statistics on IPEC usage

The most significant reforms to the PCC (the predecessor to the IPEC) occurred in late 2010. Filing of total IP cases in the PCC and grew from 31 cases in 2007 to 272 cases in 2013. Patent cases grew from 6 to 17 cases in the same period. The PCC averaged 6.5 patent cases per year between 2007 and 2010 (that is, largely prior to the reforms) and averaged 23.3 patent cases per year between 2011 and 2013.[132]

German courts

The German court systems varies in some key respects from the courts in common law countries.

Jurisdiction of German courts

Germany has a bifurcated patent litigation system, which splits responsibility for hearing patent infringement and patent validity cases between separate courts.
The Federal Patent Court has exclusive jurisdiction over patent validity trials.[133] Patent

[130] Helmers et al., *Evaluation of the reforms of the Intellectual Property Enterprise Court 2010–2013*, report to the IP Office, UK Government, 2015, p 22.

[131] As above, pp 34–35.

[132] As above, p 17.

[133] Schönbohm et al., *Germany: patent litigation,* the Legal 500*,* n.d., 8 January 2021.

https://www.legal500.com/guides/chapter/germany-patent-litigation/?export-pdf.

infringement trials are heard in the German regional courts. The Dusseldorf regional court accounts for more than half of all patent litigation in Germany.[134]

This bifurcated system complicates those patent disputes that involve both infringement and validity issues. Typically, timelines to complete patent infringement cases are shorter than timelines to complete patent invalidity cases. Estimates of the time difference for infringement proceedings vary from 8 to 15 months.[135] By comparison estimates for invalidity proceedings vary from 12 to 24 months.[136]

A court hearing an infringement case that is the subject of a separate invalidity challenge in another court may stay the infringement proceedings until the invalidity proceedings are resolved. However, the percentage of cases that are stayed is substantially lower than the percentage where the validity challenge is successful. This often leads to an 'injunction gap', where a successful patent infringement case results in an injunction in respect of a patent that is later found to be invalid. Draft legislation has recently been proposed to mitigate the impacts of this situation.[137]

Procedures in German courts

Typical steps in a German patent infringement case comprise:

- filing a complaint with the court and paying fees
- serving the complaint on the defendant and setting a deadline for a reply
- the defendant submitting the defence pleading
- the claimant submitting a written reply and the defendant submitting a final response
- oral hearing (usually 9 and 12 months after complaint filed)
- judgment of the court (usually 6 to 8 weeks after the hearing).[138]

[134] Kellenter et al., *Patent litigation in Germany: overview*, Thomson Reuters website, 2020, accessed 8 January 2021. https://uk.practicallaw.thomsonreuters.com/5-622-3450?transitionType=Default&contextData=(sc.Default)&firstPage=true.

[135] D Young & Co, *Guide to patent litigation in Germany*, D Young & Co website, n.d., accessed 8 January 2021. https://www.dyoung.com/en/knowledgebank/faqs-and-guides/faq-patent-litigation-germany.

[136] As above. Note that other sources give slightly different ranges, but there are consistent reports that invalidity cases generally take longer than infringement cases.

[137] Schönbohm et al., *Germany: patent litigation,* the Legal 500*,* n.d., 8 January 2021. https://www.legal500.com/guides/chapter/germany-patent-litigation/?export-pdf.

[138] Kellenter et al., *Patent litigation in Germany: overview*, Thomson Reuters website, 2020, accessed 8 January 2021. https://uk.practicallaw.thomsonreuters.com/5-622-3450?transitionType=Default&contextData=(sc.Default)&firstPage=true.

German regional courts hear patent infringement cases in panels of 3 judges experienced in patents.[139] The Federal Patents Court hears patent invalidity cases in panels of 5 judges, 3 of which will usually have scientific or technical qualifications relevant to the patent in question.[140]

German court procedures place a greater emphasis on written submissions, compared to common law countries like Australia. German court hearings rarely last longer than 3 hours.[141]

German courts typically appoint neutral experts, rather than rely on the expert evidence of the parties (though that may be considered). They also rarely order discovery of documents. Witness testimony is heavily supervised by the court, with the presiding judge questioning witnesses before questions are permitted from the parties' lawyers.[142]

Fees and costs for German courts

Court fees are calculated based on the value of the dispute. For a €1 million infringement case, the court fee would be €16,000. The winning party may be awarded 'statutory' costs for their lawyers. The prescribed amount for a trial is €12,000 (with higher prescribed amounts for appeals).[143]

Note that a party's actual costs are likely to be substantially higher than the prescribed amount. Estimates of actual legal fees vary between €70,000 and €500,000 for infringement proceedings, and between €90,000 and €600,000 for invalidity proceedings.[144]

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[139] Kellenter et al., *Patent litigation in Germany: overview*, Thomson Reuters website, 2020, accessed 8 January 2021. https://uk.practicallaw.thomsonreuters.com/5-622-3450?transitionType=Default&contextData=(sc.Default)&firstPage=true.

[140] D Young & Co, *Guide to patent litigation in Germany*, D Young & Co website, n.d., accessed 8 January 2021. https://www.dyoung.com/en/knowledgebank/faqs-and-guides/faq-patent-litigation-germany.

[141] Schönbohm et al., *Germany: patent litigation,* the Legal 500*,* n.d., 8 January 2021.

https://www.legal500.com/guides/chapter/germany-patent-litigation/?export-pdf.

[142] D Young & Co, *Guide to patent litigation in Germany*, D Young & Co website, n.d., accessed 8 January 2021.

https://www.dyoung.com/en/knowledgebank/faqs-and-guides/faq-patent-litigation-germany.

[143] Schönbohm et al., *Germany: patent litigation,* the Legal 500*,* n.d., 8 January 2021.

https://www.legal500.com/guides/chapter/germany-patent-litigation/?export-pdf.

[144] D Young & Co, *Guide to patent litigation in Germany*, D Young & Co website, n.d., accessed 8 January 2021.

https://www.dyoung.com/en/knowledgebank/faqs-and-guides/faq-patent-litigation-germany.

Remedies available in German courts

German regional courts can provide similar remedies to Australian courts, including preliminary and final injunctions, damages, and account of profits. However, the threshold for injunctions may be higher in Germany, and exemplary or punitive damages are not available.[145]

Representation before German courts

Parties must be represented by a German qualified lawyer. Patent attorneys cannot represent a party in an infringement cases in the German regional courts. [146]

UK opinion service

The United Kingdom Intellectual Property Office (UKIPO) offers a non-binding patent infringement and validity opinion service ('UK opinion service').[147] Any person can request a non-binding opinion on whether a patent has been infringed, or whether it is valid (or both). The key features of the service are described below. Noting that it was very costly to resolve some patent issues in court, the service was introduced in 2004 to assist parties to resolve actual or potential disputes without launching full proceedings.[148]

Key steps in the UK opinion service process

Broadly, the steps involved are as follows:

1. Person files a request for an opinion.
2. The request is advertised and 'observations' from interested parties are invited.
3. If interested parties file observations, the requester can file observations in reply.
4. The office publishes an opinion and provides it to interested parties.
5. The patentee may apply for review of the opinion.
6. If the opinion is reviewed, then interested parties file statements.
7. The review is published.

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[145] D Young & Co, *Guide to patent litigation in Germany*, D Young & Co website, n.d., accessed 8 January 2021. https://www.dyoung.com/en/knowledgebank/faqs-and-guides/faq-patent-litigation-germany.

[146] Kellenter et al., *Patent litigation in Germany: overview*, Thomson Reuters website, 2020, accessed 8 January 2021. https://uk.practicallaw.thomsonreuters.com/5-622-3450?transitionType=Default&contextData=(sc.Default)&firstPage=true.

[147] UK Government, 'Guidance: Opinions: resolving patent disputes', *Patents,* UK government website, 2014, accessed 11 January 2021. www.gov.uk/guidance/opinions-resolving-patent-disputes.

[148] Explanatory Notes, *Patents Act 2004* (UK), [73]. https://www.legislation.gov.uk/ukpga/2004/16/pdfs/ukpgaen_20040016_en.pdf.

Statutory scheme for the UK opinion service

The UK opinion service is authorised by legislation.[149] The statutory scheme sets out detailed procedural rules for opinions and reviews, including timeframes, notification of interested parties, requirements for observations, and publication of the request and opinion. A requestor is not required to identify themselves if the request is made on their behalf by an agent.[150] The legislation also expressly provides that opinions are not binding,[151] and requires opinions to be prepared by an examiner.[152] Where the opinion indicates that the patent is invalid, the patent may be revoked (after giving the patentee the opportunity to make further observations or amend the patent).[153]

Time frames for the UK opinion service

It takes no more than 3 months to get an opinion.[154] After a request is advertised, interested parties have 4 weeks to file observations. The requestor has 2 weeks after this deadline to file observations in reply. Extensions of time to make observations are short and must be supported by good reasons.

The patentee has 3 months after the opinion to request a review. Timeframes for the review are similar to the original opinion, so are likely to last no more than 3 months – so the total time period to get an opinion and a review of that opinion would ordinarily be no more than 9 months.

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[149] *Patents Act 1977* (UK), s 74A – 74B; *Patent Rules 2007* (UK), pt 8.

[150] *Patent Rules 2007* (UK), r 93(3).

[151] *Patents Act 1977* (UK), s 74A(4).

[152] *Patents Act 1977* (UK), s 74A(5).

[153] *Patents Act 1977* (UK), s 73 (1A) – (1C). Note that the UK does not appear to have a direct equivalent to Australia's third-party re-examination provisions (re-examination in the UK appears to be equivalent to further examination reports in Australia. See Intellectual Property Office, *Statutory guidance: Timeliness target for re-examination of patent applications,* UK Government website, 2016, accessed 11 January 2021. https://www.gov.uk/government/publications/timeliness-target-for-re-examination-of-patent-applications/timeliness-target-for-re-examination-of-patent-applications.

Third parties may request revocation of a granted patent, but it will be conducted as a contested hearing with detailed procedural rules to hear both parties (analogous to Australia's opposition process): *Patent Rules 2007* (UK), pt 7 and sch 3, pt 2. By contrast, a third party's involvement in re-examination in Australia is limited to making the initial request and providing supporting reasons and evidence for that request.

[154] UK Government, 'Guidance: Opinions: resolving patent disputes'*, Patents,* UK government website, 2014, accessed 11 January 2021. www.gov.uk/guidance/opinions-resolving-patent-disputes.

Costs of the UK opinion service

The official fee for requesting an opinion is £200. Professional fees charged by a lawyer or a patent attorney to prepare a request for an opinion and make observations may vary depending on the nature of the case but is estimated to typically be between £5,000 and £10,000.[155]

If an opinion is reviewed, and the review upholds the original opinion, the patentee may be liable to pay the costs of other interested parties. These might typically run to £1,000 or more.

Data on usage of the UK opinion service

Statistics on recent usage of the UK opinion service shows that the UKIPO has received 104 requests (resulting in 83 opinions) since 2017, at an average of 26.7 requests per year. Of that 104, 79 relate to whether the patent is valid (76%), 23 relate to infringement (22%), and 2 relate to both infringement and validity (2%).

Table 3 – Annual usage statistics for UK opinion service.[156]

Year	Infringement	Validity	Infringement & validity	Total
2020[157]	4	18	0	**22**
2019	5	16	1	**22**
2018	8	26	1	**35**
2017	6	19	0	**25**

The majority of requestors are third parties or anonymous, with a minority of requests being made by the patentee. Of the 83 requests that proceeded to an opinion, 37 were made by a

[155] Clarke Willmott, 'Top 10 tips to reduce the cost of IP Litigation', *Clarke Willmott*, 27 January 2014, accessed 8 January 2021. https://www.clarkewillmott.com/news/top-10-tips-to-reduce-the-cost-of-ip-litigation/.

[156] UK Government, 'Guidance: Requests for opinions: 2020', *Patents,* UK government website, 2020, accessed 11 November 2020. https://www.gov.uk/guidance/requests-for-opinions-2020.

UK Government, 'Guidance: Requests for opinions: 2019', *Patents,* UK government website, 2019, accessed 11 November 2020. https://www.gov.uk/guidance/requests-for-opinions-2019.

UK Government, 'Guidance: Requests for opinions: 2018', *Patents,* UK government website, 2018, accessed 11 November 2020. https://www.gov.uk/guidance/requests-for-opinions-2018.

UK Government, 'Guidance: Requests for opinions: 2017', *Patents,* UK government website, 2017, accessed 11 November 2020. https://www.gov.uk/guidance/requests-for-opinions-2017.

[157] Partial year, accessed 11 November 2020.

third party (45%), 32 were made by an agent without disclosing the requestor (39%), while only 14 were made by the patentee (17%).

Table 4 – Aggregate requestor statistics for UK opinion service.

Request by patentee	Request by 3rd party	Request by agent (anon)	Total
14	37	32	**83**

Infringement opinions were more likely to find that the product or process did not infringe the patent (64%), than to find that it did infringe the patent (36%). However, it should be noted that this is a small sample. Validity opinions were evenly split, with 33 finding the patent valid (52%) and 31 finding that the patent would be (at least partly) invalid (48%).

Table 5 – Aggregate outcome statistics for UK opinion service.

Issue	Infringes	Does not infringe	Patent valid	Patent invalid
Infringement	8	14	-	-
Validity	-	-	33	31

Since 2017, review has been requested for 9 opinions, with a review published in 8 of those cases. In all but one of those reviews, the original opinion was not set aside.

Table 6 – Aggregate review statistics for UK opinion service.[158]

Original opinion	Opinion not set aside	Opinion set aside	Total
Does not infringe	5	1	**6**
Patent invalid	2	0	**2**

[158] UK Government, 'Guidance: Applications for reviews on patent opinions', *Patents,* UK government website, 2020, accessed 11 November 2020. https://www.gov.uk/government/publications/applications-for-reviews-on-patent-opinions/applications-for-reviews-on-patent-opinions.

A party who is dissatisfied with the review of an opinion may appeal to a court. Since the inception of the UK opinion service only 2 reviews have been appealed and in both cases the appeal was dismissed with the court refusing to interfere with the UKIPO's review decision.[159]

WIPO Arbitration and Mediation Center

The World Intellectual Property Organization (WIPO) Arbitration and Mediation Center (AMC) is a neutral, international and non-profit Alternative Dispute Resolution (ADR) service, offering mediation, arbitration, expedited arbitration and expert determination services.[160]
The WIPO AMC was set up in Geneva in 1994, and has had an office in Singapore since 2010.[161] It has conducted over 700 ADR cases since its inception, involving parties based in over 50 jurisdictions (including Australia) in relation to disputes ranging in value from $15,000 to $1 billion. (Note that all amounts in this section of the appendix are US dollars).

Mediation at the WIPO AMC

Mediation is where a neutral mediator helps the parties to reach a mutually satisfactory settlement of their dispute. WIPO AMC mediations are confidential and non-binding (unless the parties reach an agreement, which is then enforceable as a contract), and guided by the business interests of the parties.[162] The main procedural steps in a WIPO AMC mediation are:

- request for mediation
- appointment of a mediator
- initial contact between the mediator and the parties (set up first meeting and agree on preliminary exchange of documents)
- first and subsequent meetings (agree on ground rules of the process; gather information and identify issues; explore the interest of the parties; develop options for settlement; and evaluate options)
- conclusion.[163]

[159] See *DLP Ltd, Re UK Intellectual Property Office Decision* [2007] EWHC 2669 (Pat) and *Cunningham v Nokia Corporation* [2008] EWHC 1174 (Ch).

[160] WIPO, 'Alternative Dispute Resolution', *IP Services,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/center/index.html.

[161] WIPO, *WIPO Arbitration and Mediation Center,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/center/background.html.

[162] WIPO, 'What is mediation', *Alternative Dispute Resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/mediation/what-mediation.html.

[163] WIPO, 'Principal Steps in Mediation', *Alternative Dispute Resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/mediation/principal-steps.html.

WIPO AMC mediation fees (usually shared equally between the parties) depend on the amount in dispute:

- For disputes up to $250,000, the administration fee is $250 and the mediator's fee is usually $2,500.
- For disputes over $250,000, the administration fee is 0.10% of the value of the dispute (capped at $10,000), and the mediator's fee is usually between $300 – $600 per hour or $1,500 – $3,500 per day.[164]

Arbitration at the WIPO AMC

Arbitration is where the parties agree to the dispute being settled by an independent arbitrator. WIPO AMC arbitrations are consensual (the parties must both agree to enter into arbitration), neutral (with parties choosing the arbitrator), confidential, and enforceable.[165] The main procedural steps in a WIPO AMC arbitration are:

- request for arbitration
- answer to request for arbitration
- appointment of arbitrator(s)
- statement of claim
- statement of defence
- further written statements and witness statements
- hearing
- closure of proceedings
- final award.[166]

[164] WIPO, 'WIPO mediation: schedule of fees and costs', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/mediation/fees/index.html.

[165] WIPO, 'What is arbitration?', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/arbitration/what-is-arb.html.

[166] WIPO, 'Principal Steps in WIPO arbitration and expedited arbitration', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/arbitration/expedited-rules/principal-steps.html.

An arbitration can take up to 9 months to complete. Fees for WIPO AMC arbitrations vary, depending on the amount in dispute:

- For disputes up to $2.5 million, there is a $2000 registration fee, a $2000 administration fee and arbitrator's fees that are usually between $300 and $600 per hour.
- For disputes between $2.5 million and $10 million, there is a $2000 registration fee, a $10,000 administration fee and arbitrator's fees that are usually between $300 and $600 per hour.
- For disputes over $10 million, there is a $2000 registration fee, an administration fee of between $10,000 and $25,000 and arbitrator's fees that are usually between $300 and $600 per hour.[167]

Expedited arbitration at WIPO AMC

Expedited arbitration is similar to ordinary arbitration, except it is completed more quickly (within 6 weeks) and at reduced cost. The main procedural steps in a WIPO AMC expedited arbitration are:

- request for arbitration and statement of claim
- answer to request for arbitration and statement of defence
- appointment of arbitrator(s)
- hearing
- closure of proceedings
- final award.[168]

Expedited arbitrations may take up to 5 months but are often completed in as little as 6 weeks. Fees for WIPO AMC expedited arbitrations vary depending on the amount in dispute:

- For disputes up to $2.5 million, there is a $1000 registration fee, a $1000 administration fee and a fixed arbitrator's fee of $20,000.
- For disputes between $2.5 million and $10 million, there is a $1000 registration fee, a $5,000 administration fee and a fixed arbitrator's fee of $40,000.

[167] WIPO, 'WIPO arbitration / WIPO expedited arbitration: schedule of fees and costs', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/arbitration/fees/.

[168] WIPO, 'Principal steps in WIPO arbitration and expedited arbitration', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/arbitration/expedited-rules/principal-steps.html.

- For disputes over $10 million, there is a $1000 registration fee, an administration fee of $5,000 to $15,000 and arbitrator's fees in the range of $300 to $600 per hour.[169]

Expert determination at WIPO AMC

'Expert determination' is where parties submit a dispute or difference to one or more experts who make a determination on the matter. Expert determination is consensual, neutral and flexible (with parties choosing the expert); confidential; and binding (unless the parties agree otherwise).[170] The main procedural steps in WIPO AMC expert determinations are:

- request for expert determination
- answer to request for expert determination (unless jointly filed)
- appointment of expert
- expert prepares description of the matter referred to expert determination
- further submissions, conferences and meetings
- determination.[171]

For expert determinations at the WIPO AMC, the administration fee is 0.10% of the value of the dispute (capped at $10,000), and the expert's fee is usually between $300 and $600 per hour or $1,500 to $3,500 per day.[172]

Other services provided WIPO AMC

The WIPO AMC provides administrative support to the above services, including videoconferencing facilities and systems to file, store and retrieve parties' case submissions. The WIPO AMC also provides events, training, workshops and free webinars.[173]

The WIPO AMC also provides 'Good Offices' services which provide early procedural information and assistance to parties to facilitate either a direct settlement or a submission

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[169] WIPO, 'WIPO arbitration/WIPO expedited arbitration: schedule of fees and costs', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/arbitration/fees/.

[170] WIPO, 'What is expert determination?', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/expert-determination/what-is-exp.html.

[171] WIPO, 'Principal steps in WIPO expert determination', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/expert-determination/principal-steps.html.

[172] WIPO, 'WIPO expert determination: Schedule of fees and costs', *Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/expert-determination/fees/index.html.

[173] WIPO, *WIPO Arbitration and Mediation Center,* WIPO website, n.d., accessed 18 December 2020.

https://www.wipo.int/amc/en/center/background.html.

of their dispute to WIPO mediation or arbitration. Parties may contact WIPO where no dispute resolution agreement currently exists between the parties.[174]

Usage of WIPO AMC

The WIPO has public information on AMC usage and a breakdown for 2019, as follows:

- The AMC receive 62 mediation, arbitration and expert determination cases globally.
- Only 2% of the parties to WIPO AMC disputes were in Oceania.
- ADR disputes relating to patents make up 25% of the caseload globally. [175]

Note also that the WIPO receive 117 'good offices' requests globally in 2019. The total usage of the AMC (both good offices requests and ADR cases) has been increasing steadily every year since 2012.[176]

WIPO Arbitration and Mediation Center has administered 6 mediation and arbitration cases with Australian parties since 2014. The claimants in these cases were Australian individuals, SMEs and large companies involved in disputes with foreign parties. These disputes related to copyright (50%), trademarks (33%) and contractual terms (17%).[177]

IP Australia collaboration with WIPO AMC

In late 2016, IP Australia partnered with the WIPO AMC to promote WIPO ADR options to resolve IP disputes, and to create an online ADR service. The online service was launched on 25 January 2017 and enables disputes to be resolved online using high-quality videoconferencing facilities and an online case management system. This service is managed by the WIPO.[178]

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[174] WIPO, 'WIPO Good Offices'*, Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/goodoffices/.

[175] WIPO, '2019 Review: WIPO Arbitration and Mediation Center'*, Alternative dispute resolution,* WIPO website, 2020, accessed 18 December 2020. https://www.wipo.int/amc/en/new/2019review.html.

As above, Annex 7. https://www.wipo.int/export/sites/www/amc/en/docs/pr2020annex7.pdf.

[176] WIPO, 'WIPO caseload summary: WIPO mediation, arbitration, expert determination cases and good offices requests'*, Alternative dispute resolution,* WIPO website, n.d., accessed 18 December 2020. https://www.wipo.int/amc/en/center/caseload.html.

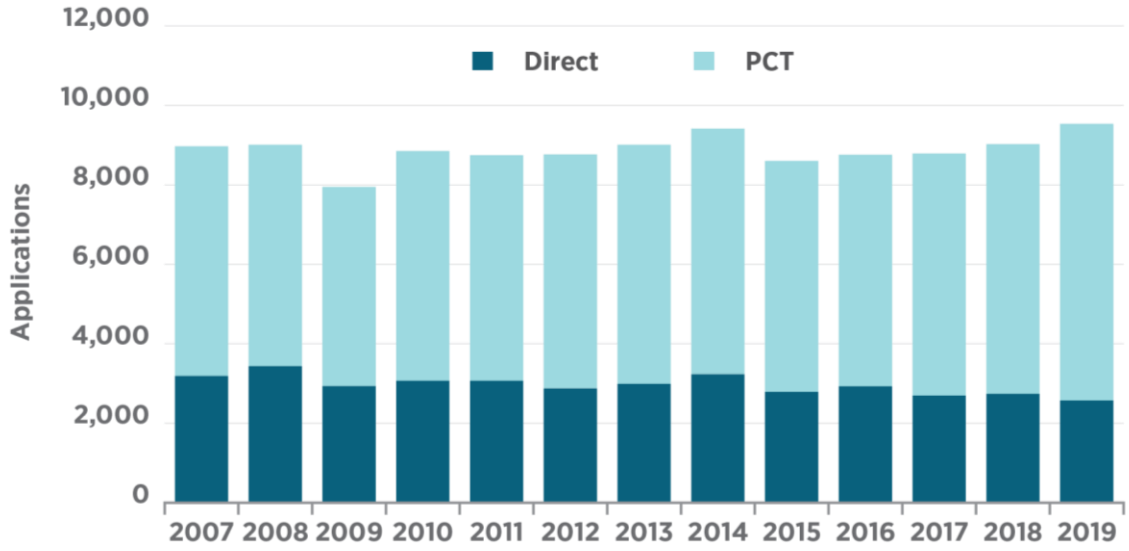
[177] Unpublished internal data.

[178] IP A, 'International alternative dispute resolution', *IP infringement,* IP Australia website, 2016, accessed 18 December 2020. https://www.ipaustralia.gov.au/ip-infringement/enforcing-your-ip/international-alternative-dispute-resolution.

Appendix F – Updated Productivity Commission report statistics

The following data are derived from figures 18.1 to 18.4 in the 2016 Productivity Commission (PC) *Intellectual Property Arrangements* report,[179] updated to include data from subsequent years from WIPO, the World Bank, and IP Australia. It should be noted that these figures include all businesses, not just small to medium enterprises (SMEs). Separating the SME contribution from the large business contribution to the export of IP is work that would be well worth doing. The SME sector may be underperforming, or it may be over performing, but it is doubtful that the general picture will change much.

PC Figure 18.1 – Patent applications by filing route: (i) Australian applications filed abroad

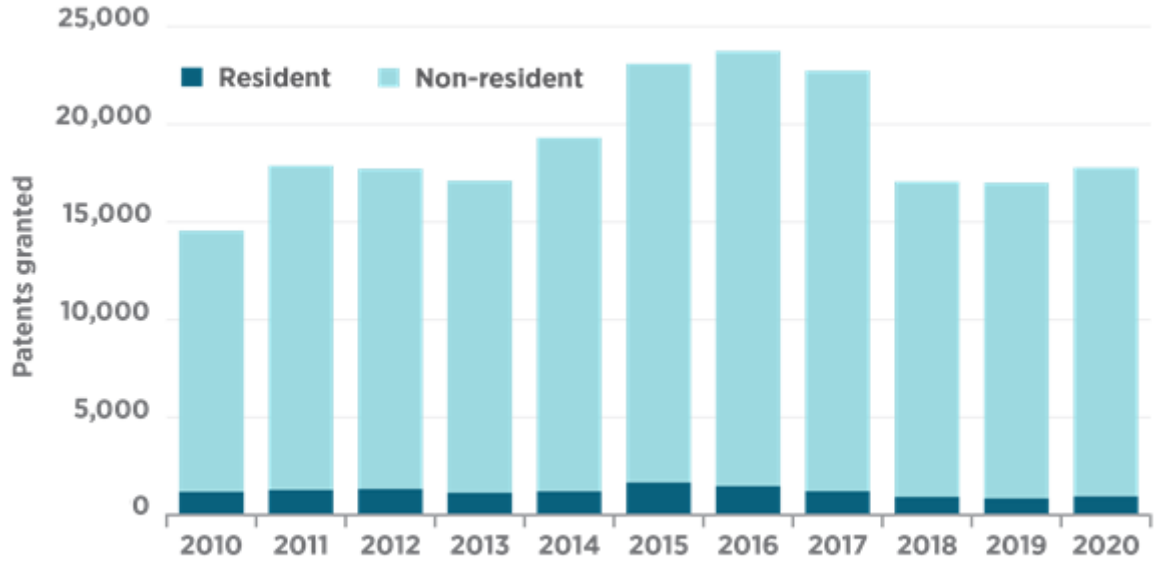


Source: WIPO (2019)

[179] Productivity Commission (PC), *Intellectual Property Arrangements*, Inquiry Report *No. 78*, pp 529 – 532, PC, Australian Government, 2016.

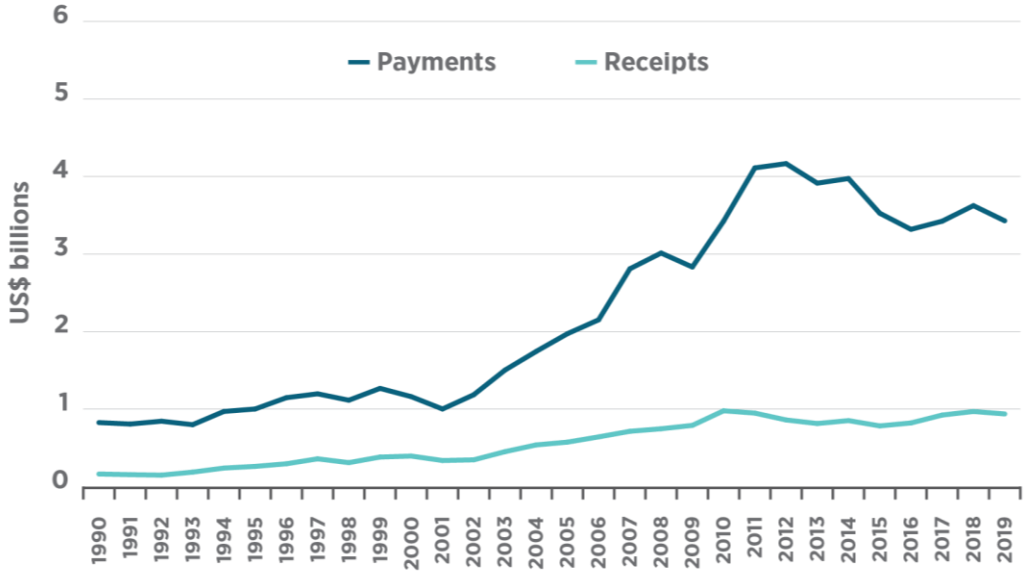
https://www.pc.gov.au/inquiries/completed/intellectual-property/report/intellectual-property-overview.pdf.

PC Figure 18.2 – Patents granted in Australia to residents and non-residents



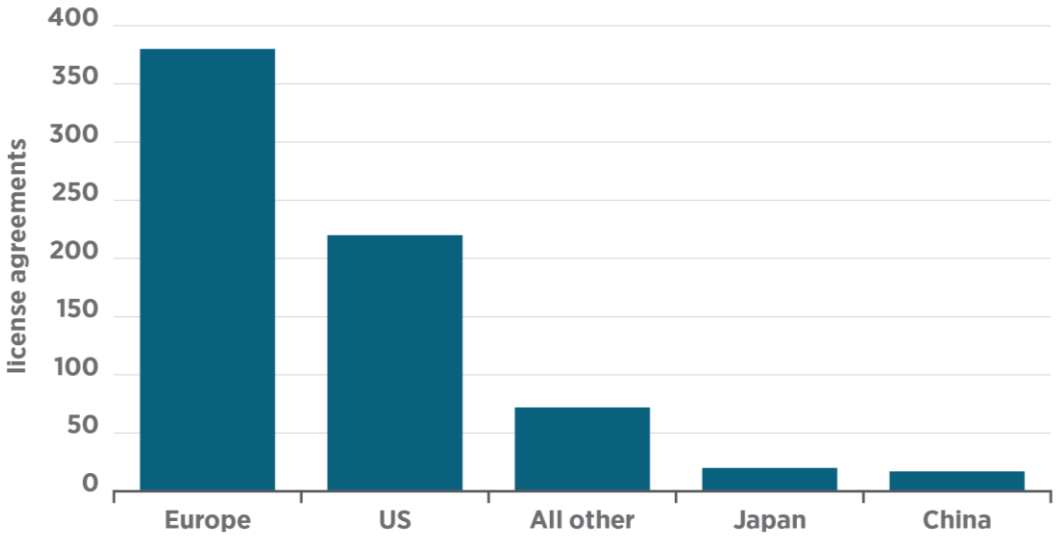
Source: IP Australia

PC Figure 18.3 – Australia's international IP licensing payments and receipts (balance of payments, current US$ billions)



Source: World Bank (2020)

PC Figure 18.4 – Patent license agreements with other jurisdictions



Notes: Transactions reported to IP Australia where a non-owner of the patent has been granted authoritative permission to use, but not own, the IP rights, with effective date from 04/08/2001 to 29/06/2020.

Source: IPGOD (2020), patent-party activity table.

Appendix G – IP Australia forthcoming Economic Research

Preliminary findings from a forthcoming economic research paper further fills out the picture of how small to medium enterprises (SMEs) engage with the patent system.[180] The research looks at SME usage of the IP system during the period between 2001–02 and 2016–17. Some of the findings have already been summarised in section 4(i) of this report. Other findings of the report are summarised here.

Those SMEs that did own patents (and other IP rights) paid higher median wages than SMEs without any IP rights. For example, SMEs that owned only patents (and no other IP rights) had a median wage per employee of $58,494, compared with a median wage per employee of only $43,327 for SMEs without any type of IP right. SMEs that owned patents, trade marks and designs had a median wage per employee of $60,898.

However, the research found no strong evidence that SMEs owning patents perform better than those without patents in terms of productivity growth.

- For SMEs as a whole, no strong evidence was found that those filing for a patent were more likely to have a positive or high growth in subsequent years than those that did not apply for a patent.
- However, medium businesses filing for a patent were more likely to experience a positive and high growth than their equivalent counterparts that did not apply for a patent.

The fact that this is not the case for micro and small businesses may suggest that, once a business grows bigger, it may have more resources to innovate and to file for patents; in turn, patents are more likely to contribute to firm's further growth.

The research also looked at the characteristics of businesses who patent. Patent-intensive firms, including SMEs, tend to operate in environments characterised by the presence of smaller competitors that are similar in nature. Beyond R&D, patent-intensive SMEs are not more collaborative than their peers. Patent-intensive SMEs are distinguished by their use of engineering and marketing skills. Large firms draw on a broader set of skills in innovation, including scientific and research, information technology, business management and financial skills.

[180] IP Australia, Australian small and medium enterprises (SMEs) and intellectual property rights, IP Australia Economic Research Paper, Australian Government, 2021 (forthcoming).