



SUBMISSION

Submission to the Productivity
Commission's Draft Report on
Intellectual Property Arrangements

JULY 2016

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The Business Council of Australia is a forum for the chief executives of Australia's largest companies to promote economic and social progress in the national interest.

About this submission

This is the Business Council's submission to the Productivity Commission's draft report into intellectual property arrangements.

The draft report contains substantive recommendations that cover the entire intellectual property system.

Since the Business Council's initial submission to the issues paper related to many of these recommendations, this submission is limited to supplementary feedback on some patent-related recommendations in the draft report.

Overview

The creation and use of intellectual property occurs in the context of a broader innovation system.¹

The Commission has characterised the objectives of intellectual property policy as '[seeking] to balance the interests of rights holders and users, including follow-on innovators'. The draft report suggests balance is achieved by pursuing three objectives:

1. encouraging investment in intellectual property that would not otherwise occur
2. providing the minimum incentives necessary to encourage that investment
3. resisting impediments to follow-on innovation, competition and access to goods and services.

In our submission to the issues paper, the Business Council put forward our view that Australia's current patent system works well (although the 'innovation patent' system requires reform).

While the Business Council supports some of the conclusions and recommendations on the patent system, we suggest that two recommendations in particular will likely have the unintended consequences of hindering the objectives of intellectual property policy, as put forward by the Commission.

- Removing the patentability of all software would undermine the incentives to invest in software innovation. It would also have the potential to generate unintended consequences, such as greater complexity in the patent system, increase reliance on trade secrets and potentially breach Australia's international obligations.
- Depending on how it is designed, an objects clause could increase the complexity, subjectivity and unpredictability of patent examinations. This would add uncertainty and cost to the patent system and could discourage investment in intellectual property.

¹ OECD, *National Intellectual Property Systems, Innovation and Economic Development*, January 2014.

Key recommendations

1. The final report's narrative should clearly set out the practical evidence of problems with the fundamentals of the current patent system. Australia's current position as a net importer of intellectual property does not negate the need for policy settings to incentivise investment in intellectual property, balanced with the need to ensure efficient use of intellectual property by consumers and follow-on innovators.
2. The threshold for granting patents should be aligned with international standards (draft recommendation 6.1).
3. Any objects clause must be carefully designed and able to be applied unambiguously. The Commission should not recommend any objects clause that would require patents to be assessed on the basis of being 'socially valuable', as this would be impractical and difficult to apply (draft recommendation 6.2).
4. The Productivity Commission should address the overly low threshold for innovation patents, including potentially through abolishing innovation patents (draft recommendation 7.1).
5. The Productivity Commission should not proceed with its recommendation to remove the patentability of all software (draft recommendation 8.1).

Discussion

The narrative should clearly set out the practical evidence of problems

The Commission's recommendations are justified on the basis that Australia is a net importer and, in the Commission's view, 'Australia's stance on IP rights is out of kilter with its position as a net importer [of intellectual property]'.

As outlined in our submission to the issues paper, the Business Council believes that Australia's patent system generally works well.

While we support some adjustments where there is evidence of room for improvement, the Commission has put forward significant changes to the fundamentals of the patent system.

Where the final report recommends significant change, the report ought to clearly spell out:

1. specific and practical problems with the current system
2. clear evidence of practical problems with the current system
3. how a proposed solution would improve the current system in a way that increases competitiveness and productivity across all sectors.

It is especially important to take a sophisticated view of Australia's position as net importer. Being a net importer is not, of itself, an argument against strong patent rights.

We strongly support the need for policy settings that encourage efficient use of intellectual property by consumers and follow-on innovators. It is important, however, to recognise that Australia's position as a net importer does not negate the benefits from strong patent rights, including investment, employment and economic growth from generating and exporting intellectual property from Australia.

Being a net importer is not necessarily undesirable. Intellectual property is a key input in the production of many goods and services. Economic efficiency is increased when countries specialise in their comparative strengths.

Taking an aggregate view of Australia's imports of intellectual property can obfuscate the dynamics specific to individual industry sectors. Despite being a net importer, Australia will continue to have specific sectors that are net exporters of intellectual property.

The draft report could be more optimistic about Australia's ability to be a destination for innovators (both those that generate intellectual property, and follow-on innovators).

Alignment with international standards should be the objective for the threshold for granting patents

The Commission has proposed amending the *Patents Act 1990* to amend the threshold for granting patents and determine that 'an invention is taken to involve an inventive step if, having regard to the prior art base, it is not obvious to a person skilled in the relevant art' (draft recommendation 6.1).

We concur with the Commission's analysis that, when patents are too easily granted, they impose a cost on the community.

In principle, raising the threshold is worthy of further consideration.

That said, legislation was passed only recently to raise the threshold—the *Intellectual Property Amendment (Raising the Bar) Act 2012*—and is yet to be tested by a court decision. A more informed decision can be taken once the impacts of this legislation are fully known.

A critical objective for determining Australia's threshold should be to, as much as desirable, align the patent test with international jurisdictions, like Europe or the United States. This reduces costs for businesses engaged across multiple jurisdictions' patent systems and improves the predictability and simplicity of our patent examinations.

An objects clause should not increase complexity, subjectivity or unpredictability

The Commission has recommended instituting a clause in the *Patents Act 1990* to describe the objects of the patent system: namely, 'to enhance the wellbeing of Australians by providing patent protection to socially valuable innovations that would not have otherwise occurred and by promoting the dissemination of technology' (draft recommendation 6.2).

The Commission indicates that ‘an objects clause would influence the granting of patents through the interpretation of the patent criteria’, depending on the construction of the clause.

The Business Council would caution against designing an objects clause that requires patent examiners to make subjective assessments of whether an application is in the public interest or is socially valuable.

A poorly designed objects clause would increase the complexity, subjectivity and unpredictability of patent examinations.

Assessing patents on the basis of their perceived national interest could be impractical and difficult to apply, especially for ‘step change’ innovations, where the future benefits are intrinsically difficult to foresee or define. It would require IP Australia’s examiners to demonstrate policy capability and economic expertise in making decisions about the social value of applications.

Rather than explicitly requiring public benefit to be assessed by examiners, the threshold for granting patents should set out an objective test that is designed to use technical and practical criteria as a proxy for determining social and economic benefits. This is already achieved through the current five-step test, which covers the ‘manner of manufacture’, the inventive step, the requirement to be novel, the requirement to be useful and the requirement that a patent has not previously been used commercially.

Innovation patents require reform

As outlined by the Productivity Commission, ‘innovation patents’ have different objectives to more general patents: to promote innovation by small and medium enterprises.

Innovation patents are not meeting the overarching objectives of the intellectual property system, as put forward by the Commission. This is consistent with the Australian Council on Intellectual Property’s findings in the review of the innovation patent system conducted in 2014, and IP Australia’s 2015 paper that found innovation patents do not lead to innovation that would not otherwise occur.

In our submission to the issues paper, the Business Council supported raising the threshold or limiting the scope of innovation patents.

The Commission has recommended going a step further and abolishing innovation patents (draft recommendation 7.1).

The threshold for granting innovation patents is overly low and problematic. We maintain our view that this should be addressed, including potentially through abolishing innovation patents.

The Commission should not recommend removing the patentability of all software

The Commission has recommended amending the *Patents Act 1990* to specifically prevent the granting of patents for business methods and software (draft recommendation 8.1).

There are four key reasons to discard the recommendation to remove the patentability of all software:

1. Software continues to be highly innovative. Just like other patentable products, software requires patent protection to ensure there are sufficient incentives for investment, by enabling patent holders to generate a commercial return for their product.
 - The Commission perceives that there are problems with software that does not warrant patent protection. Any such problems would be addressed by amendments to the inventive step (as per draft recommendation 6.1).
2. The Commission's distinction between the value of 'embedded' and 'non-embedded' software is nebulous. In practice, distinguishing between the two would generate complexity and distortionary behaviour.
3. Implementing the recommendation will likely have adverse unintended consequences of encouraging trade secrets, limiting diffusion of knowledge and restricting consumer choice.
4. The recommendation in its current form would likely breach Australia's obligations under international agreements, specifically the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

These key reasons are outlined in more detail below, along with a discussion of business methods.

Software is highly innovative and does not raise the same concerns as business methods

The Commission's recommendation to remove the patentability of software (draft recommendation 8.1) is based on the view that software patents 'do not encourage new, valuable innovation and they can be used to block the implementation of new ideas'.

The Business Council rejects the idea that software is not valuable innovation. Whether an invention's functionality is implemented through software or hardware is a 'distinction without a difference'²: both have the potential to result in innovation and improve productivity.

Software has been critical to recent waves of innovation like the uptake of mobile devices, cloud computing or crowdsourcing. It will continue to be essential for emerging sources of

² A Mossoff, 'A Brief History of Software Patents (and Why They're Valid)', *56 Arizona Law Review Syllabus* 62 2014.

innovation that hold significant potential for productivity improvements, including the Internet of Things, greater automation of services and disruption of the health sector. The utility of software goes far beyond consumer-facing products (although these can be highly innovative).

Companies invest a significant amount in software research and development. A 2008 study in the United States found R&D investment represented between 11 and 31 per cent of revenue in surveyed software companies.³

This investment generates substantial benefits for the community in terms of new innovation, economic growth and employment.

Removing the patentability of software would erode the incentives for investment in some innovation (and hence restrict benefits to the community) by inhibiting the ability of patent holders to generate a commercial return for their product.

It is true that there is a non-marginal amount of software available freely or at no cost (open software), and that open source software generates economic value and provides a worthwhile competitive force. However, it would not be correct to suggest that open source software disproves the need to incentivise investment in software through patentability.

The economics of open source software suggest that some types of software are not likely to be offered on an open basis, because the costs of developing that capital-intensive software outweigh any of the possible benefits to open source developers (like the benefit of increased useability, career aspirations, ego gratification or personal remuneration).⁴

If the Commission's concern is that patents are being granted for trivial or non-innovative subject matter, this would be addressed by the other recommendation to amend the inventive step for patents generally, or the judgement in *Commissioner of Patents v RPL Central Pty Ltd* which clarified that only software inventions that make a technological contribution should be eligible for patent protection.

The other argument put forward by the Commission is that software development cycles are much less than the term of patent protection (20 years), so the patent holder generates returns for most of the patent period for an innovation that is obsolete. The Commission cites the frequency of software upgrades for a mobile device as an example: 'there were six full versions of the android operating software between September 2008 and October 2015'.

The Commission's discussion appears to conflate product life cycles (the time between inception and obsolescence of a *product*) with innovation cycles (the time between conception and obsolescence of a particular *innovation*).

The short product cycles cited by the Commission would only be relevant if every version of a software product was created from scratch and did not retain any of the innovations

³ PwC, *How to capture value through software R&D*, 2008, <https://www.pwc.com/us/en/technology-innovation-center/assets/softwareandd.pdf>

⁴ J Lerner & J Tirole, 'The Simple Economics of Open Source', *NBER Working Paper Series*, no 7600, <http://www.nber.org/papers/w7600.pdf>

found in previous versions. This is not true of software or any type of product. Auto manufacturers, for example, produce a new 'version' of their car each model year. While the updated model may add various improvements and features, the core innovations are retained across model years (often for decades).

It would not be true to say that all software experiences a step-change in innovation every few months: the software used to pilot an aircraft, design a major piece of infrastructure, use an MRI scan for a patient, or manage a mine's logistics, for example, will have significantly longer development cycles and commercial lives than suggested by the Commission.

It is impractical and difficult to prepare a workable definition of 'embedded' software

Over time, courts have interpreted the test within the Patents Act (the 'manner of manufacture' test) in a way that is flexible and able to accommodate technological developments like software.

The Commission suggests 'there may be cases where products with embedded software are socially valuable and worthy of patent protection from a community perspective', as opposed to other, 'non-embedded' software that is viewed as not sufficiently innovative.

This distinction is nebulous. In practice, distinguishing between the two would generate significant complexity and likely distortionary behaviour.

There is significant discussion around the difficulties of carving out an exemption from non-patentability for embedded software, as illustrated by New Zealand's recent experience, where developing such a distinction is described as 'near impossible'.⁵

Potential considerations in drafting a definition include:

- whether such a description would discriminate against devices that use cloud-based software, versus pre-installed software
- whether making a distinction could result in distortionary behaviour where providers, who currently give consumers choice about what software they can install, are motivated to reverse-engineer a device to make it more difficult to remove the pre-installed software, in order to meet a definition of 'embedded' software
- whether patent examiners would be expected to subjectively assess the extent to which embedded software or the broader device contribute to the inventiveness of a product under assessment.

Proceeding with the exclusion of software from patentability would necessitate an overly complicated work-around for 'embedded' software that is complex, costly and potentially so prohibitively difficult as to limit the social and economic benefits of software.

⁵ See, for example, the legal brief from Shelston IP, *Recent developments regarding software patents under New Zealand's Patents Act*, <http://www.shelstonip.com/news/recent-developments-regarding-software-patents-under-new-zealands-new-patents-act/>

The recommendation will likely have adverse unintended consequences

Two examples of adverse unintended consequences have already been given: a potential reduction in innovation investment; and potential limited consumer choice to meet the requirements of 'embedded' software.

One additional unintended consequence is limiting the diffusion of knowledge. Unlike trade secrets, patents require that an invention be published openly, meaning that others are able to use that knowledge to generate follow-on innovation (under commercial arrangements).

One response from software companies that would no longer be able to access patents would be increased reliance on trade secrecy or less public sharing of information publicly.

This could have the adverse effect of decreasing innovation.

Excluding software from patents could breach international agreements

Removing the patentability of software would likely breach Australia's international agreements, namely the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

Under Article 27, all signatories to the TRIPS agreement commit that, in their respective jurisdictions, 'patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application'.

Although business methods arguably fall outside of the definition of 'fields of technology', it is difficult to argue the same for software.

Software is not included in the examples of excludable matter set out in the TRIPS agreement except:

- inventions where the prevention of them is necessary to protect ordre public (public order) or morality
- diagnostic, therapeutic and surgical methods for the treatment of humans or animals
- plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes.

Commentary on business methods

Business methods should not be conflated with software.

Legislative change is not necessary to exclude business methods from patentability. The precedent in the judgement in *Commissioner of Patents v RPL Central Pty Ltd*⁶ is clear:

The fact that it is a scheme or business method does not exclude it from properly being the subject of letters patent, but it must be more than that. There must be more than an abstract

⁶ *Commissioner of Patents v RPL Central Pty Ltd* [2015] FCAFC 177.

idea; it must involve the creation of an artificial state of affairs where the computer is integral to the invention, rather than a mere tool in which the invention is performed ... It is not a patentable invention simply to 'put' a business method 'into' a computer to implement the business method using the computer for its well-known and understood functions.

As this judgement sets out, business methods and software are not interdependent. The courts have effectively already provided a clear distinction between the two, negating the need for any legislative clarification. Examiners and courts are also successfully ensuring that patents are not being granted to business methods that do not warrant patent protection.

The legal framework for patents is sufficiently flexible to account for changes in technology and does not require amendment.⁷

⁷ A view also expressed in, for example, the Law Council of Australia's submission to the issues paper.

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