

Comments on Productivity Commission Inquiry into Intellectual Property Arrangements 2016

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31 May 2016

Dear Commissioners

Here is a response to your draft report on intellectual property. My main interest is in the relevance to software, technology and the digital economy.

Overview

I am concerned at the report's intense promotion of Fair Use, a loophole that benefits scale internet companies. Fair Use has been rejected by most large economies outside the US including, most tellingly, the UK.

In my view copyright does a reasonably good job for society and should not be weakened. That said, harassment of innocent infringers should be addressed and stopped.

On patents, I agree with the report's view that business methods and software should not be patented. Copyright and access controls provide sufficient protection, and the law should not stifle independent development.

In several places, the report is confused or wrong about aspects of software economics and the software industry.

Consumers benefit from software protections

Consumers and the world have benefited enormously from the work of Google, Apple and Microsoft. We've also benefited from the work of IBM, through our interactions with banks and airlines.

All strongly protect their technology, including using patents.

There are also some dynamic case studies showing how consumers benefit when the work of software developers is properly protected. For example, Apple originally intended that apps for the

iPhone would be created using javascript, which exposes the source code to copiers.¹ Top developers rejected that approach, forcing Apple to release a native SDK in 2008. The result was an explosion of apps and innovation.

Android allowed C++ from the start, via JNI, and thus enjoys a rich ecosystem of apps. Kudos Google.

In some ways, these examples actually show that copyright is too weak, because developers must also use technical means to restrict access to source code. But the point is that the combination of existing copyright with prudent technical measures generally suffices to protect work.

No, they don't open source their core technology

Chapter 8, discussing patents, states that Google, IBM, RedHat and Sony do not rely on any IP protection and instead "open source" their work. (p244)

That is simply not correct.

Google, IBM and Sony all strongly protect the technology they make money from, including using copyright and patents. This is easily established by the fact that the source code for Google's search technology or IBM's mainframe systems is not available to the public.

Even with the open source Android, Google keeps the parts important to its business, such as maps, search and the app store, closed source and tightly controlled^{2 3}. It requires phone makers to licence those technologies^{4 5}.

IBM's main products – CICS, DB2, IMS and WebSphere - are all closed source and protected.

Searches of patent records, news reports and filings with the Security and Exchange Commission also establish this. For example, Google's SEC filing of 2012 states that:

¹ Jobs' original vision for the iPhone: No third-party native apps, 9to5 Mac, 21 October 2011
<http://9to5mac.com/2011/10/21/jobs-original-vision-for-the-iphone-no-third-party-native-apps/>

² Ron Amadeo, Google's iron grip on Android: Controlling open source by any means necessary, Ars Technica, 21 Oct 2013 <http://arstechnica.com/gadgets/2013/10/googles-iron-grip-on-android-controlling-open-source-by-any-means-necessary/>

³ Peter Bright, Neither Microsoft, Nokia, nor anyone else should fork Android. It's unforkable, Ars Technica, , 08 Feb 2014 <http://arstechnica.com/information-technology/2014/02/neither-microsoft-nokia-nor-anyone-else-should-fork-android-its-unforkable/>

⁴ Ron Amadeo, New Android OEM licensing terms leak; "Open" comes with a lot of restrictions, Ars Technica, 13 Feb 2014 <http://arstechnica.com/gadgets/2014/02/new-android-oem-licensing-terms-leak-open-comes-with-restrictions/>

⁵ Ben Edelman, Secret Ties in Google's "Open" Android, 13 Feb 2014. Edelman is an Associate Professor at Harvard Business School <http://www.benedelman.org/news/021314-1.html>

We rely on a combination of intellectual property laws... to protect our proprietary technology and our brand. We have registered, and applied for the registration of, U.S. and international trademarks, service marks, domain names, and copyrights. Additionally, we have filed U.S. and international patent applications covering certain of our proprietary technology. ...

Our patents, trademarks, trade secrets, copyrights, and other intellectual property rights are important assets for us. ...

We also seek to maintain certain intellectual property as trade secrets. The secrecy could be compromised by outside parties, or by our employees, which could cause us to lose the competitive advantage resulting from these trade secrets.

Any significant impairment of our intellectual property rights could harm our business and our ability to compete. ... Any increase in the unauthorized use of our intellectual property could make it more expensive to do business and harm our operating results.⁶

RedHat's business is selling support services for software mostly written by other people, so its provision of source code is not, as the review seems to think, the disclosure of its own valuable work. Further, the provision of source code does not mean the code is not protected. Open source code is usually protected by licences that make use of copyright. The GPL licence is very strict.

The references cited by the review do not support its claim. They point to marketing-type pages with links to other peoples' code, community projects or simple code that helps customers use the companies' proprietary technology.

Recommendation: The Productivity Commission should examine and resolve this issue before finalising the report.

Unintended consequences of Fair Use

Some of the proposed Fair Use amendments could have dangerous side effects, especially for digital innovators. For example, the proposed right to take IP not being used commercially could create the following problems

- the creator might have retired the software because it contains security vulnerabilities
- large infringers could use litigation to harass creators over whether they were exploiting their IP properly

⁶ Google, Form 10-K, US Security and Exchange Commission, 2012
<https://www.sec.gov/Archives/edgar/data/1288776/000119312513028362/d452134d10k.htm>

- the software might access web infrastructure that the creator does not wish to provide, for cost or other reasons
- the creator might have many valid reasons to delay publication or release, including finishing another project or waiting for the lucrative holiday sales season

For consumer welfare, the above situations would have the following effects

- expose consumers to software with vulnerabilities, where no party takes responsibility
- force software developers and innovators overseas to avoid a hostile legal environment

Fair Use might kill software protections

Google's 26th May 2016 victory in the Fair Use case ⁷ could significantly weaken the protection afforded software. Google's argument was that, since the framework was public, it was fair game.

Annette Hurst, lead attorney for Oracle in that case, has written a thought provoking piece arguing that the logical extension of the verdict is that no software licence is safe. That includes the GPL licence used in open source. ⁸ Many critics don't seem to be aware that the licence in this case was the GPL.

Although controversial, Hurst's views have merit. Weakening of software licences, including the GPL, would profoundly damage the innovation environment.

Fair Use is not consistent with easier access for small firms

Fair Use would impose huge costs on small firms seeking to assert their rights against infringers. This is inconsistent with the review's promotion of easier access to the courts for small firms.

For example, in *Oracle Corporation vs Google* (May 2016), the court found that Java declaring code was protected by copyright, but Oracle still had to incur huge legal costs fighting Google's Fair Use defence and, even then, it lost. See the series of reports by Joe Mullin for Ars Technica. ⁹

⁷ Joe Mullin, Google beats Oracle—Android makes "fair use" of Java APIs, Ars Technica, 27 May 2016 <http://arstechnica.com/tech-policy/2016/05/google-wins-trial-against-oracle-as-jury-finds-android-is-fair-use/>

⁸ Annette Hurst, The Death of "Free" Software . . . or How Google Killed GPL, LinkedIn, 27 May 2016, <https://www.linkedin.com/pulse/death-free-software-how-google-killed-gpl-annette-hurst>

⁹ Joe Mullin, Oracle slams Google to jury: "You don't take people's property", Ars Technica, 23 May 2016 <http://arstechnica.com/tech-policy/2016/05/oracle-slams-google-to-jury-you-dont-take-peoples-property/>

James Gosling, one of the engineers who wrote Java while at Sun Microsystems, has been intensely critical of Google's actions in taking the code, writing:

*While I have differences with Oracle, in this case they are in the right. Google totally slimed Sun. We were all really disturbed, even Jonathan: he just decided to put on a happy face and tried to turn lemons into lemonade ...*¹⁰

A small company or individual writer or artist would not have a hope of asserting its rights in similar circumstances. The report acknowledges this but seems to skate over it. It is an issue that needs to be addressed.

Prescriptive law does actually work

The report argues Fair Use is necessary to accommodate changes in technology, and also argues against prescriptive law. Current practice does not really support those arguments. We have very prescriptive laws to deal with speeding and drink driving, and they work well. Our law responds also quickly when needed. For example, we have laws against revenge porn.

The UK takes the approach that new requirements can be reasonably identified and accommodated with specified exemptions for non-consumptive use, particularly text mining and backup. That is a safer approach.

Trade imbalance is Comparative Advantage at work

A strong theme of the report is the trade imbalance in IP goods between Australia and the US. This is misleading and inconsistent with the Productivity Commission stance on other sectors, such as cars.

Most of the imbalance is due to the fact that other nations produce movies we want to watch, software we want to use and medicines to protect our families. That trade improves consumer welfare.

Changing our IP laws will have very little impact if any. It may even harm overall welfare by depriving consumers of some content.

¹⁰ Dan Farber, Java creator James Gosling: 'Google totally slimed Sun', Cnet, 01 May 2012

Furphy that Fair Use created Google

The IP debate in the UK saw a claim that Google could not have started in the UK due to that country lacking Fair Use.¹¹ The same claims appear in the Productivity Commission review (p146).

I don't believe the claim is correct. ISPs all cache their content on local servers, and have been doing so since at least 1995. If the claim about Google was correct, those ISPs would have been blocked, but they weren't.

Protect innocent infringers by targeted changes

Harassment of innocent infringers should be addressed directly instead of by weakening copyright. In particular, personal costs orders against lawyers who abuse their standing in such cases would do wonders.

Keep Circuits Layout Act

The Circuits Layout Act might not be used much, but that doesn't mean it's not valuable. In high capital industries such as semiconductors, clear laws help avoid litigation. This is especially so in industries run by engineers, such as semiconductors.

The future will involve a lot more chip design and fabrication, including for Internet of Things devices, cars, computer vision, AI and drones. For example Google has announced a new ASIC for its Tensor Flow machine learning technology¹² and startup Afero has announced a secure radio communications chip for its new product.¹³

It's not really the time to scrap the Circuits Layout Act.

Furthermore, the Circuits Layout Act is actually a precursor of future arrangements the law will have to make to deal with technology. Neither copyright nor patents are ideal for software. Eventually legislators will deal with that. The Circuits Layout Act is an example of a specially crafted law that fits a need introduced by new technology and for that reason is an important part of the law.

¹¹ Adam Sherwin, David Cameron's 'Google-model' vision for copyright under fire, The Guardian, 14 Mar 2011 <http://www.theguardian.com/media/2011/mar/14/cameron-copyright-review-google-model-small-outfits-wary>

¹² Google supercharges machine learning tasks with TPU custom chip, Google Blog, 18 May, 2016 <https://cloudplatform.googleblog.com/2016/05/Google-supercharges-machine-learning-tasks-with-custom-chip.html>

¹³ Ina Fried, A former Google engineer lands \$20 million for his internet-of-things startup, Recode, 18 May 2016 <http://www.recode.net/2016/5/18/11696820/google-engineer-internet-of-things-afero-samsung>

Universal coverage makes copyright more efficient, at no cost

The report suggests that the overarching coverage of copyright, where every creation is protected, “represents an excess; a weighting towards rights holders” (p 159 and see also p 103).

I disagree. Courts do not accord undue rights to trivial content and therefore no-one makes claims about trivial content. Thus consumers suffer no costs for this universal coverage.

What’s more, the broad coverage means administration of copyright is simpler and thus cheaper. The courts and their commercial judgements ensure the broad definitions are not a problem.

Lengthy cover is not as dumb as it looks

One of the biggest criticisms of copyright law is the long duration which, I agree, does look ridiculous at first glance. (pp 17, 29, 117)

However it seems to me there are legitimate reasons for long duration. Copyright is not permanent like other forms of property¹⁴, and thus short durations could expose creators to significant bargaining disadvantage.

For example, if copyright stopped when a person died, it would be extremely hard for elderly writers to sell their work to publishers or movie studios. The publishers would know they just have to wait a few years in order to get the work for free. Writers over 50 would be at a huge disadvantage in bargaining. Writers in their 60s and over could well find it impossible to sell rights.

For major works, a studio would think nothing of waiting five years in order for rights to lapse. That’s how long they would spend preparing and filming a new movie anyway.

For mid-level works, a wait of 20 years would not be out of the question. Thus the publisher would ask themselves: “Do I publish now and lose 30 percent of the takings, or wait 20 years and keep the lot?”

If those sorts of practices became common, it would deter writers and other creators.

¹⁴ Instead of property, we could talk of commercial reward. The point is, these are society’s incentive to contribute

Keep IP policy attached to industry

The review asks whether IP policy should be passed to a specialist body. I believe it should not. IP is a tool to aid society, and so it needs to remain intimately connected with the industries and the society it serves.

For example, pharmaceutical IP needs to take account of the PBS, medical opinion, patient groups and scientific research. That's a totally different environment from music IP or trademarks. Each sector requires different industry expertise, and approaches IP with different levels of importance.

Isolating IP in a specialist body would lead to IP policy becoming a self-protecting industry in its own right, including fighting the interests it is meant to serve.

Agree – we don't need patents for software

Response to Draft Recommendation 8.1 - I agree that business methods and software should not be patentable, with the following observations

- Software is different from business methods and should be treated separately. I concur with Mark Summerfield's view on this.¹⁵
- Although I don't see the need for software patents, I respect the views of patent attorneys who support them, and would like to see this topic discussed more

Response to Information Request 8.1 - I can't see any grounds for treating embedded software differently from other software. The argument that it's part of a manner of manufacturer makes sense at law, but is really part of an archaic tradition. I don't believe it should be subject to patenting.

Software does involve inventive steps

Software has transformed our economy over the past 25 years and yet the report is dismissive towards it. It cites the New Zealand view that software lacks an inventive step (p250) and the ACIP report that claims software is just filling in the details (p245).

In fact software involves many inventive steps. Part of the problem for the law, and now for economists, is that many software techniques are implemented in devices such as GPUs (Graphics Processing Units) and thus qualify for patent protection on those grounds. This has tended to spare the law from having to deal with software as such, which I think is a pity.

¹⁵ Mark Summerfield, The Australian Productivity Commission's Deeply Flawed Proposal to Abolish 'Software Patents', Patentology, 01 May 2016 <http://blog.patentology.com.au/2016/05/the-australian-productivity-commissions.html>

The review also misunderstands information about how often software is updated. For example the fact that there were six versions of Android (p 243) does not mean every version is new, or that frequent updates reduces the value of each version. On the contrary, if a program can be updated safely and quickly, that means it is well designed and thus more valuable.

Also, on a grammatical note, the report twice refers to “source codes” (pp 239 and 245) which is not established usage. The plural term is source code, similar to the way “writing” is used. This should be fixed in a professional report.

Conclusion

Copyright works well as it is. We should not weaken it with Fair Use, which would have unexpected effects and essentially benefit a few large internet companies at the expense of the innovation economy.

I agree patents are not the appropriate way to protect software, but believe this topic needs more discussion.

As a medium term aim, I would like to see the Copyright Act split into new Acts each addressing a different industry sector, in ways relevant to each sector.

One such Act would address software and circuit design, including the different role of text in representing programs, and the commonalities between software and circuit design. This Act would position Australian at the forefront of modern IP law.