



Commissioner Karen Chester
Commissioner Jonathan Coppel
Intellectual Property Arrangements
Productivity Commission
By email to: intellectual.property@pc.gov.au

2 June 2016

Dear Commissioners Chester and Coppel,

**DRAFT REPORT ON INTELLECTUAL PROPERTY ARRANGEMENTS:
SUBMISSION BY ARISTOCRAT LEISURE LIMITED**

Aristocrat Leisure Limited (Aristocrat) welcomes the opportunity to comment on the Productivity Commission's draft report on Intellectual Property Arrangements in Australia.

In its original submission to the PC review, Aristocrat argued primarily to keep the status quo in relation to innovation patents. Aristocrat notes Draft Recommendation 7.1 and re-iterates its position against the abolition of innovation patents as expressed in its pre-draft submission. While it maintains this position, it was not aware that the Commission was considering recommending removing software as a patentable subject matter and thus did not make representations on this in the initial submission. The submission below therefore deals primarily with Chapter 8 of the draft report and Draft Recommendation 8.1 of that chapter.

In summary this submission seeks to make the following representations in relation to Draft Recommendation 8.1 on Business Methods and Software:

- Eligibility of software patents is directly linked with Australian research and development (R & D) spend, jobs and exports.
- Business methods and software should be assessed under the existing law relating to patent eligibility and inventive step rather than excluded in its entirety.
- A move towards a specialised Patent Court may assist in ameliorating some of the difficulties with existing patent litigation procedure.
- It is an oversimplification of the issue to conflate business methods with software as a single category to be denied patent eligibility.
- Patents should be allowed to protect investments in "mission critical" software development.
- While Aristocrat sees no reason to exclude software from patentability, at the very least, patents should be allowed for embedded software.
- First mover advantage does not "render patent protection moot" for electronic gaming machines which often have a commercial lifespan of over 10 years.

Eligibility of software patents is directly linked with Australian R & D spend, jobs and exports

Aristocrat's IP strategy has directly contributed to an increased spend in R & D which has led to greater Australian employment opportunities at Aristocrat. In the year to 30 September 2015 Aristocrat spent over A\$191m in R & D. As mentioned in our original submission Aristocrat is an Australian headquartered company, the majority of the IP rights are owned by the Australian entity, Aristocrat Technologies Australia Pty Ltd, which sits under the parent company Aristocrat Leisure Limited. Aristocrat uses this intercompany IP to bring revenue back to Australia where it is deployed in domestic R & D and other areas.

Any move to remove the eligibility of software patents in Australia is likely to impact on domestic R & D spend for Aristocrat. Greater predictability for the business provides the company with a higher level of comfort to invest in R & D knowing that the associated R&D investment can be protected against unauthorised use of that R&D output by third parties. This also has a flow on effect for jobs and exports of our IP based products. Currently Aristocrat employs approximately 800 Australians.

Aristocrat is not unique in this respect. A number of other Australian entities invest heavily in R&D in the technology and software space and rely on Australia's robust IP regime to protect their investment and drive future R&D spend. These entities include Cochlear which invested \$128m R & D in 2015¹ and ResMed which invested US\$114.9m in R & D in 2015².

Chapter 8 contains very little empirical evidence or economic modelling to support draft recommendation 8.1. With regard to Figure 8.2 on page 235, it is possible that a significant portion of licensing revenue is not related to patents but is related to other forms of intellectual property. Aristocrat submits that it would be worthwhile conducting a further study to investigate the relative portion of software licensing that relates to the licensing of patents.

Business methods and software should be assessed under the existing law relating to patent eligibility and inventive step rather than excluded in its entirety

It is Aristocrat's view that the Commission may have taken an overly simplistic view of business methods and software and their applicability to the patent system in Australia. A blunt legislative approach in excluding them from patent eligibility would disregard the growing jurisprudence in this area whereby the courts have been effective in reining in any excessive use of the patent system to protect business methods and software. While Aristocrat notes imperfections with the system, it is

¹ Cochlear Annual Report 2015, p. 36 <
http://www.cochlear.com/wps/wcm/connect/2a3956c0-f09d-4ce7-a8c9-8b0ddccf1999/en_corporate_annualreport2015_financial_1.54mb.pdf?MOD=AJPERES&CO NVERT_TO=url&CACHEID=2a3956c0-f09d-4ce7-a8c9-8b0ddccf1999>

² ResMed Annual Report 2015, p.5 <
http://s2.q4cdn.com/231003812/files/doc_financials/annual/854d6754-2905-497d-bb74-78bb038e560a.pdf>

clear that decisions are being interpreted expansively to restrict so-called business methods. The recent Full Federal Court's rulings on computer implemented inventions in Research Affiliates³ and RPL Central⁴ are clear evidence that the courts are ready and able to constrain any misuse of the system. The decision in RPL Central was recently affirmed by the High Court.⁵

In the Research Affiliates case, the Full Court considered claims directed to operation of a computer to generate an index for use in passive investing. These claims were held not to be patentable subject matter. The Court found that any inventive step arises in the creation of the index and not in the computer implementation. The Court in Research Affiliates suggests that the UK approach of making a "technical contribution" is relevant in Australia and this falls under the requirement of an "artificial effect as set out in the High Court's "NRDC case"⁶.

*" it is apparent that applying a test of a "technical contribution" has similar flexibility and, in this area of technology can be useful in an analysis of an "artificial effect" "*⁷

It also needs to be noted that in February 2016 IP Australia updated the Australian Patent Office Manual of Practice and Procedure to clarify "examination practice regarding patentable subject matter in view of the Full Federal Court decision Commissioner of Patents v RPL Central Pty Ltd". The Commission quotes IP Australia's position which is already very close to the European position:

*"...the application of technology ... must be directly involved with the creation of the 'useful product' in a substantial, rather than incidental, way. ... Importantly, the mere presence of science of technology ... is not sufficient to be patentable. "*⁸

The New Zealand experience, as highlighted by the Commission⁹ shows that a legislative approach to resolving the issue of computer implemented inventions may not be the most effective approach in dealing with this complex issue. In our view, allowing Australian jurisprudence to evaluate and consider matters on a case-by-case basis with the development of clear legal precedent is the most effective approach. As set out above, and acknowledged by the Commission, the recent Research Affiliates and RPL cases provide salient examples of the Courts' ability to apply the law in an effective manner and which eliminates the need for the blunt application of legislative intervention.

Further, in its initial submission to the Commission, Aristocrat highlighted some difficulties with the existing patent examination process which the Commission also acknowledges in its draft report. Aristocrat also recommended an improvement via a streamlined approach to dealing with IP litigation:

³ Research Affiliates LLC v Commissioner of Patents [2014] FCAFC 150

⁴ RPL Central Pty Ltd v Commissioner of Patents [2015] FCAFC 177

⁵ RPL Central v Commissioner of Patents HCASL 84

⁶ National Research Development Corporation v Commissioner of Patents [1959]102 CLR 252

⁷ Research Affiliates LLC v Commissioner of Patents [2014] FCAFC 150 at p.36.

⁸ P.238 Draft report

⁹ P.250 Draft report

“One such example could be a dedicated Patent Court with expert Judges sitting on a judicial panel. In our view it would be important for the judicial panel to have expertise in highly technological matters – this would provide a greater level of consistency and predictability in litigation outcomes. As noted above, decisions of judges vary greatly in relation to “inventive step” and an expert judicial panel may assist in providing more consistent decisions.”¹⁰

In sum, Aristocrat recommends that business methods and software should be assessed under the existing jurisprudence and examination process relating to both “manner of manufacture” and inventive step rather than excluding its patent eligibility by legislation. A move towards a specialised Patent Court may assist in ameliorating some of the difficulties with existing patent litigation procedure. In answering the Commission’s question as to whether the test for software should be dealt with by legislation or patent examination, Aristocrat considers that the latter is the correct approach given the need to address this complex issue on a case by case basis. If this approach is adopted, there should be no need to make Draft Recommendation 8.1.

Conflation of business methods with software may be an oversimplification

Aristocrat submits that it may be an oversimplification of the issue to conflate business methods with software as a single category to be denied patent eligibility. It is Aristocrat’s view that business methods should be decoupled from software.

The Commission correctly notes that with the rise of the digital economy many innovations are implemented by software. Only a small portion of these are true “business methods”. One danger of the Commission’s blanket approach to excluding software from patentability is that many highly inventive and economically beneficial inventions could be excluded. One such example is Aristocrat’s Hyperlink Patent (AU Patent 81994/98) which is a patent which has been utilised since 1998 and has been a key product differentiator leading to economic growth, jobs and greater investment in R & D for Aristocrat.

Aristocrat supports the argument articulated by Mark Summerfield in his “Patentology” blog where he says the conflation of business methods with software is a “gross simplification”.¹¹ Summerfield argues that the cross over between business methods and software is generally minimal and states:

“It is also apparent that the vast majority of software is not directed to implementing business methods. The software that controls a car’s engine, a washing machine, a dishwasher, the Wi-Fi implementation in a mobile phone, the complex systems of an Airbus A380, a wireless router, the digital video decoders in a television, a set-top box, or a Blu-ray player, the switching equipment in the telecommunications networks, life support systems, X-ray machines, gene sequencers, systems on the International Space Station, satellites, warships, military drones and guided weapons, public transport signalling systems, traffic management systems, security systems, laboratory test and measurement apparatus... none of this software implements a business method! All of it, in fact, either enables entirely new functionality, or

¹⁰ Aristocrat submission p.7

replaces prior electronic and/or mechanical systems with a cheaper, more efficient and/or more powerful digital alternative."¹²

In the draft report, Business methods are defined as "a method of operating any aspect of an economic enterprise, including 'trading, transacting, finance resource management, marketing and customer service'"¹³. It is submitted that to exclude inventions from patentability based on such a definition would be unworkable. To take one current example, it would capture technology such as contactless payment systems. Provided it meets novelty and inventive step criteria, such a system should be patentable subject matter, as it comprises both hardware and software elements, but would be excluded based on the above definition because it is "transacting" or "finance resource management". There is no question there is substantial cost and risk associated in developing such a technology and it is of significant benefit to consumers and the economy generally.

Put another way, it is difficult to draw a bright line between what is a method of operating an economic enterprise and what is an improved technical solution in the context of improving efficiency within an enterprise.

For example, in the field of improving efficiency in the mining industry¹⁴, Australian patent 200524579 in the name of BHP Billiton Innovation Pty Ltd describes a method for determining an extraction schedule. The objective function described on pages 38 and 39 is subject to both physical constraints and value constraints and result in a method for scheduling the physical extraction of a resource that increases the net present value of the extraction schedule. An improved order of the extraction of physical material is clearly a technical solution grounded in a change to a process in the real world but from 10,000 feet might be characterised as a method of operating an economic enterprise. At least 60 per cent of the world's mines operate with Australian-made and designed software according to the Australian Trade Council¹⁵.

Another example is Australian patent application 2014262377 in the name of Touch Networks Australia Pty Ltd. The goal of this patent and other similar patents is to reduce fraud during payment transactions. Reducing electronic fraud provides a significant economic benefit and involves the deployment of technical solutions yet as it occurs in a transaction, it may be inadvertently excluded by the current definition.

It is the interplay between mathematics and art which constitutes the major component of electronic gaming machine (EGM) development for Aristocrat. Generally there are six artists and two mathematicians who are responsible for the majority of this development process. A single software designer then subsequently joins the team and is involved only to integrate the mathematics and art once developed. From Aristocrat's perspective, the Commission's broad interpretation of "business methods and software" may exclude many patents related to the application

¹² Summerfield, M, The Australian Productivity Commission's Deeply Flawed Proposal to Abolish 'Software Patents', "Patentology", 1 May 2016.

¹³ Draft report p.234 (quoting ACIP 2003, p.1)

¹⁴ Mining in Australia accounts for more than 6 % of the Australian economy contributing \$121bn per year according to the Minerals Council of Australia

¹⁵ Australian Mining, This is our Story <http://www.thisisourstory.com.au/our-contribution.aspx>

of mathematics and art in the development of an EGM, notwithstanding that the software designer's role merely facilitates the unique development process undertaken by the inventors. Put another way, the coding involved is an ancillary and minor part of the overall process.

Patents should be allowed to protect investments in “mission critical” software development

As a minimum patents should be allowed to protect investments in “mission critical” software development which are not business methods and which allow for technical advancement of a machine. As Summerfield argues, there is a vast difference between the fast moving world of mobile apps and the kind of critical and expensive software design which is prevalent in so many products and systems.¹⁶

Test for “embedded software”

While Aristocrat sees no reason to exclude software from patentability, at the very least, patents should be allowed for embedded software.

In Aristocrat’s view the easiest way to provide a bright line as to what is embedded software and what is not, is to provide a definition that prevents an invention from being claimed that amounts to no more than executing software on a general purpose computer.

One way to do so would be to define that patent protection is available for a device or machine in which software is embedded, provided it meets other eligibility requirements, but not for software per se.

Commercial lifespan of software for EGMs

The Commission makes an assumption that there is a short innovation cycle for software and in some instances this is undoubtedly the case. However it needs to be noted that in the case of an EGM supplier the commercial lifespan of EGMs for venues in Australia is often greater than 10 years. In this instance, first mover advantage does not “render patent protection moot” – rather it necessitates patent protection for the investment made in developing the new technology.

Further, as the Commission correctly notes in its data, many patents are allowed to lapse well before their term and therefore do not act as an impediment to new market entrants. This could be enhanced by the Commission’s recommendation to increase renewal fees which would discourage patentees from maintaining “weak” patents.

Concluding remarks

In addition to the comments made above in relation to Business Methods and Software, Aristocrat would like to re-iterate its key points on **innovation patents** from its initial submission. These are:

¹⁶ Summerfield, M, The Australian Productivity Commission’s Deeply Flawed Proposal to Abolish ‘Software Patents’, “Patentology”, 1 May 2016, P.3.

- The utilisation of innovation patents by EGM suppliers reflects incremental advances in the design of EGMs.
- The higher protection provided by innovation patents provides EGM suppliers with greater degree of predictability with regard to the outcome of litigation. Greater predictability allows more investment in domestic R & D which has a flow on effect for jobs and exports of our IP based products.
- Aristocrat would support a further detailed evaluation of the impact of an abolition of innovation patents on the manufacturing sector and the EGM supply sector.

Aristocrat notes that Draft Recommendation 7.1 calls upon the abolition of innovation patents, however the draft report provides no alternative to a system which serves the purpose of protecting incremental innovations, nor does it provide a mechanism to fill the gap between designs and patents. Aristocrat takes the view that a second-tier patent system would provide certainty and encourage further R & D investment.

As an Australian entity investing heavily in R&D and reliant on a robust IP system to protect its investment, Aristocrat believes it is well placed to assess the merits of the Commission's recommendations. There is no question from Aristocrat's perspective that some of the changes will result in a strategic reassessment of Aristocrat's approach to R&D and technology. Aristocrat believes a number of its peers will be in a similar position. Such an outcome could be contrary to Australia's intention to transition from a primary industry and resources based economy to an economy that will thrive in the digital century.

Aristocrat is grateful for the opportunity to provide a submission on the Draft Report from the Productivity Commission's review into Intellectual Property (IP) Arrangements.

Should you require further information in relation to this submission, please do not hesitate in contacting our offices on the details provided below.

Yours sincerely

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