Further Submission to the Productivity Commission
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Dear Productivity Commission,

Thank you for forwarding your *Draft Report on Public Support for Science Innovation* (November 2006).

Whilst I acknowledge that the *Draft Report* is of significant length and covers many issues my suggestion would be that it could be further enhanced by more closely examining:

- the concept of open innovation
- economic modelling upon which to build principles and policies for the access to and reuse of publicly funded knowledge and
- the notion of whole of government open access licensing

I would be willing to discuss these issues with you further in person or through teleconference.

Open Innovation

The Report could usefully provide more information on the very important notions of Open Innovation and Collaborative Innovation.

The reference to Open Source and IP at 5.40 is only a part of the story.

I would urge you to consider devoting one whole chapter to the notion of open innovation. For an account of one version of this notion see: Henry Chesbrough, *Open Innovation: The New Imperative for Creating and Profiting from Technology,* Boston: Harvard Business School Press, 2003.

> "Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. [This paradigm] assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology." Henry Chesbrough, *Open Innovation: Researching a New Paradigm* http://www.openinnovation.net/

Open innovation is an important part of an innovation system and the commercialisation process. Too often we think of commercialisation as the process of closing off knowledge through a particular IP management strategy. Open innovation may also lead to commercialisation and be part of a commercialisation strategy.

For example, open access to knowledge in the form of data held by government and key research institutions throughout Australia could sponsor untold innovation in areas as diverse as water management, construction and precise positioning agriculture. This could lead to the generation of intellectual property, business models or other solutions that could generate revenue. Furthermore sharing of insights about these processes or products may serve to improve or enhance the original work or may sponsor new innovations. To conceptualise commercialisation as a narrow concept blinds us to the very great value of openly sharing ideas.

At a recent talk I heard an engineer recount how a leading edge construction firm had built a bridge that was closed soon after opening due to suspected faults. It became known as the "wobbly bridge" due to movement within its structure. In order to save their reputation the firm invested a significant amount of money to find a solution – and they did. Once the solution had been found they shared their insights with the world and this enhanced their reputation and led to further business. This sharing in itself is an example of open innovation that sponsored further innovation and commercialisation. But there are two other points of open innovation to be noted. Firstly the firm in seeking its solution sought the advice of experts in all of its offices across the world which in itself is a form of open innovation. Secondly instead of seeking to find the solution inhouse the firm could have turned the problem over to the world and may have solved the problem sooner and more cheaply although the commercialisation outcomes may have been different.

There is another aspect to open innovation that is worth highlighting. Presume I hold a particular patent in the biotechnology area (on for example a research tool) but do not have the resources to innovate on top of the patent. If I allowed anybody in the world to use the patent to innovate on top of it on condition that they allow me to use their innovation royalty free I may find that someone or a number of people take up the challenge and through collaborative innovation I have greatly improved the efficiency of my business.

As we highlight in our recently published report - B. Fitzgerald, A. Fitzgerald, M. Perry, S. Kiel-Chisholm, E. Driscoll, D. Thampallai and J. Coates, *Creating a legal framework for copyright management of open access within the Australian academic and research sector* (2006) www.oaklaw.qut.edu.au – seamless access to knowledge is critical in an innovation landscape fuelled by high powered ICT:

> 1.01 The recent decision by the Australian Bureau of Statistics (ABS) to move away from a model of selling data to researchers and others to providing it freely online is a clear example of this philosophy.[1] The Hon Peter Costello, MP, Treasurer of the Commonwealth of Australia in announcing these changes explained that:
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> Statistics are so vital to our national life, and have made such a key contribution to nation-building, that they lend themselves easily to structural analogies. They are the cornerstone of our decision-making, the very building-blocks of research, planning and discussion within governments and the community and are one of the important pillars of our

[1] < http://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b2562bb00121564/83b66e9ffafd6dabca257140007575b5!OpenDocument> at 21 July 2006.

democracy. Ready access to those statistics for those that need them is of paramount importance…..In June this year I was happy to announce that, as a result of a May 2005 Budget initiative and consistent with the Government's policy of Backing Australia's Ability, many ABS publications would be available free of charge from the Internet. These publications previously cost between 20 and 40 dollars each. [2]

Economic Modelling of Information Policy

Much of the work in Australia in relation to allowing publicly funded data to flow in the name of sponsoring innovation is being done by lawyers (open content licensing) and library professionals (open access repositories). Unfortunately detailed economic modelling to support these initiatives is lacking. Your final report could be tackling these issues in greater depth and referring to the literature that exists in other jurisdictions.

Whole of Government Open Access Licensing

One of the simplest yet most important things that this report could endorse would be the adoption of whole of government licensing models that facilitate the release of government data and digital content. Much government owned data and digital content – which could otherwise be released - is not made accessible on a mass scale because of concerns about the cost and efficiency of licensing, or a simple lack of understanding as to how this might be achieved. With the development of generic open access licensing solutions like Creative Commons we now have the framework through which much of this material can be easily made available. It is no longer a legitimate excuse to lock publicly funded data and content away simply because you cannot work out how to licence it on a mass scale in a cost effective manner.

More work needs to be done to define the issues that need to be resolved and to co-ordinate this initiative at all levels of government.

They key for harnessing the power and productivity of research in the 21st century is working out how to use collaboration to your advantage. Open innovation is an integral part of this equation and the first major step we can make towards sponsoring open innovation is to "unlock the potential" of vast amounts of data stored by government under a clear and effective generic licensing system that clearly articulates the principles for reuse.

Such a move should be underpinned by economic modelling that highlights the value of this activity. This is very much lacking in the Australia.

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[2] The Hon Peter Costello MP Treasurer, *The ABS Centenary Celebration*, 8 December 2005 < http://www.treasurer.gov.au/tsr/content/speeches/2005/019.asp> at 22 July 2006

www.law.qut.edu.au/about/staff/lsstaff/fitzgerald.jsp
www.cci.edu.au
www.oaklaw.qut.edu.au
www.ip.qut.edu.au

Brian is a well-known intellectual property and information technology lawyer. He has published articles on Law and the Internet in Australia, the United States, Europe, Nepal, India, Canada and Japan and his latest (co-authored) books are *Cyberlaw: Cases and Materials on the Internet, Digital Intellectual Property and E Commerce* (2002); *Jurisdiction and the Internet* (2004); *Intellectual Property in Principle* (2004). Over the past five years Brian has delivered seminars on information technology and intellectual property law in Australia, Canada, New Zealand, USA, Nepal, India, Japan, Malaysia, Singapore, Norway and the Netherlands. In October 1999 Brian delivered the Seventh Annual Tenzer Lecture - Software as Discourse: The Power of Intellectual Property in Digital Architecture - at Cardozo Law School in New York. Through the first half of 2001 Brian was a Visiting Professor at Santa Clara University Law School in Silicon Valley in the USA. In January 2003 Brian delivered lectures in India and Nepal and in February 2003 was invited as part of a distinguished panel of three to debate the Theoretical Underpinning of Intellectual Property Law at University of Western Ontario in London, Canada. During 2005 Brian has presented talks in Germany, India and China and was a Visiting Professor in the Oxford University Internet Institute's Summer Doctoral Program in Beijing in July 2005. He is also a Chief Investigator of the ARC Centre of Excellence on Creative Industries and Innovation (CCI). He is also Project leader for the DEST funded Open Access to Knowledge Law Project – OAK Law Project, looking at legal protocols for open access to the Australian research sector. His current projects include work on digital copyright issues across the areas of Open Content Licensing and the Creative Commons, Free and Open Source Software, Fan Based Production of Computer Games, Licensing of Digital Entertainment and Anti-Circumvention Law. Brian is a Project Leader for Creative Commons in Australia. From 1998-2002 Brian was Head of the School of Law and Justice at Southern Cross University in New South Wales, Australia and in January 2002 was appointed as Head of the School of Law at QUT in Brisbane, Australia.