

Sharing environmental data: the role of an information policy framework and copyright licensing

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INTRODUCTION

Advances in information and communication technologies have brought about an information revolution, leading to fundamental changes in the way that information is collected or generated, shared and distributed. The importance of establishing systems in which research findings can be readily made available to and used by other researchers has long been recognized in international scientific collaborations. Acknowledgement of the need for data access and sharing is most evident in the framework documents underpinning many of the large-scale observational projects which generate vast amounts of data about the earth, water, marine environment and the atmosphere. For more than 50 years, the foundation documents of major science collaborative projects have typically included as a key principle a commitment to ensuring that research outputs will be openly and freely available. While these documents are often entered into at the international level (whether between governments or their representatives in international organisations), individual researchers and research projects typically operate locally, within a national jurisdiction. If the data access principles adopted by international scientific collaborations are to be effectively implemented they must be supported by the national policies and laws in place in the countries in which participating researchers are operating.

NATIONAL POLICY FRAMEWORKS

There are a number of policy statements at an international level that promote public availability and open exchange of data, including the Bermuda Principles (1996)[1] and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003)[2]. The key strategy in ensuring that international policies requiring “full and open exchange of data” are effectively acted on in practice lies in the development of a coherent policy and legal framework at a national level. The national framework must support the international principles for data access and sharing but also be clear and practical enough for researchers to follow at a research-project level.

While national frameworks for data sharing are well-established in the United States and Europe this is not the case in many other jurisdictions (including Australia). In Australia, the current situation with respect to public sector information (PSI) access and reuse is fragmented and lacks a coherent policy foundation, whether viewed in terms of interactions within or among the different levels of government at the local, State/Territory and Federal levels, or between the government, academic and private sectors. In 2008, the *Venturous Australia* report of the Review of the National Innovation System recommended (in Recommendation 7.7) that Australia should establish a National Information Strategy to optimise the flow of information in the Australian economy [3]. However, just how a National Information Strategy could be established remains unclear.

A starting point for countries like Australia that have yet to establish national frameworks for the sharing of research outputs has been provided by the Organisation for Economic Co-operation and Development (OECD). At the Seoul Ministerial Meeting on the Future of the Internet Economy in 2008, the OECD Ministers endorsed statements of principle on access to research data produced as a result of public funding and on access to public sector information [4]. These documents establish principles to guide availability of research data, including openness, transparency, legal conformity, interoperability, quality, efficiency, accountability and sustainability.

The development of a national framework for data management based on principles promoting data access and sharing (such as the OECD Recommendation) would help to incorporate international policy statements and protocols into domestic law. This would provide stronger guidance (if not a requirement) for researchers to consider and, where practicable, incorporate these data sharing principles into their research project data management plans.

LEGAL APPROACHES TO DATA MANAGEMENT

The importance of strategic data management and proper understanding of the legal regimes applying to data cannot be overstated. The best approach to copyright protection of data was recently considered by the High Court of Australia in *IceTV Pty Limited v Nine Network Australia Pty Limited* (judgment delivered April 2009) [5]. Prior to this case, the 2002

¹ Bermuda Principles (1996) http://www.ornl.gov/sci/techresources/Human_Genome/research/bermuda.shtml.

² Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003) <http://oa.mpg.de/openaccess-berlin/berlindeclaration.html>.

³ Cutler & Company (2008) *Venturous Australia: Building Strength in Innovation*, Review of the National Innovation System, p95, <http://www.innovation.gov.au/innovationreview/Pages/home.aspx>.

⁴ OECD, *Recommendation of the Council concerning Access to Research Data from Public Funding C(2006)184*, 14 December 2006, at <http://webdomino1.oecd.org/horizontal/oecdacts.nsf/Display/3A5FB1397B5ADFB7C12572980053C9D3?OpenDocument>.

⁵ *IceTV Limited v Nine Network Australia Pty Limited* [2009] HCA 14 (22 April 2009).

case *Desktop Marketing Systems v Telstra* [6] had introduced a broad rule which seemingly moved the boundaries of copyright protection in Australia to require permission to reuse even very small and factual excerpts of data and information. This was out of line with both the historic and international conventions of copyright law, which have traditionally stated that mere facts do not attract copyright protection, and had created much confusion and uncertainty as to when data can be reused in the Australian context. In the *IceTV* case, the High Court indicated that the *Desktop Marketing* authority should be approached with caution [7] and tightened to some extent the originality threshold to hold that reproduction of the purely informational material within a compilation will not constitute a substantial part sufficient to give rise to an infringement claim [8].

Whether copyright protection extends to data and how access and reuse rights will be managed under copyright law are important considerations for any research project or organisation. It is imperative to have proper policies and procedures in place to deal with these legal rights in order to ensure that data is managed in a way that facilitates wider access and reuse.

DATA ACCESS REGIMES – CREATIVE COMMONS LICENSING

Arguments have been made that the best approach to facilitate wide access and use of data is to remove the data from copyright protection. For example, the Science Commons Project has developed a Protocol for Implementing Open Access Data which is largely predicated on dedicating data to the public domain under a Creative Commons Zero (CC0) dedication [9]. While this may be appropriate in the US, it is less applicable in Australia. The no-copyright option has been considered at length in Australia, both by the Copyright Law Review Committee in its Crown Copyright inquiry which formally ran from 2003 to 2005 [10], followed by detailed consideration of the recommendations by all Australian jurisdictions, and, more recently by the Victorian Parliamentary Economic Development and Infrastructure Committee [11]. In all cases, there has been an overwhelming lack of support for a no-copyright approach, even though it has been expressly raised.

The better approach for promoting open access to data in Australia is to apply a Creative Commons Attribution (CC-BY) licence to the data. This allows the data to be widely shared and used, but also preserves the creator's right to attribution. Using copyright in this way – as a strategic mechanism – means that rights of attribution and integrity remain intact. If copyright is removed, it is much harder to require that the source of the data be acknowledged with every use. The no-copyright approach for data was largely designed to combat the perceived problem of “attribution stacking” – where there are far too many contributors to a dataset to realistically require attribution to everyone. However, these problems can be pragmatically addressed without removing copyright, by providing a way to attribute the group as a whole or by providing attribution by way of a URL linking to a webpage where all contributors are listed.

Recently, a number of Australian Government departments and bodies have utilised CC-BY licensing of their data. These include the Australian Bureau of Statistics [12], Geoscience Australia [13] and the Water Information project. In Queensland, the Government Information Licensing Framework (GILF) has explored and endorsed the use of Creative Commons licences for nearly all Queensland Government data [14]. These movements in Australia have built on work already done in the UK by the Power of Information Taskforce [15] and in the US, such as President Obama's use of CC for the official White House portal [16].

CONCLUSION

Establishing data sharing arrangements for complex, international e-research collaborations and earth observation projects requires, at the national level, appropriate information policy frameworks and management of legal rights. While international science collaborations and earth observation projects typically express a commitment to making data freely and openly available, in the absence of a supporting policy and legal framework, such objectives risk falling short of expectations.

⁶ *Desktop Marketing System Pty Ltd v Telstra Corporation Limited* [2002] FCAFC 112.

⁷ *IceTV Limited v Nine Network Australia Pty Limited* [2009] HCA 14 (22 April 2009) at [187]-[188] per Gummow, Hayne and Heydon JJ.

⁸ See *IceTV Limited v Nine Network Australia Pty Limited* [2009] HCA 14 (22 April 2009) at [42]-[44] per French CJ, Crennan and Kiefel JJ.

⁹ See <http://sciencecommons.org/projects/publishing/open-access-data-protocol/>.

¹⁰ Copyright Law Review Committee (CLRC) *Crown Copyright* (April 2005) http://www.ag.gov.au/agd/WWW/clrHome.nsf/Page/Overview_Reports_Crown_Copyright.

¹¹ Victorian Parliament Economic Development and Infrastructure Committee, *Inquiry into Improving Access to Victorian Public Sector Information and Data*, Final Report, June 2009, http://www.parliament.vic.gov.au/edic/inquiries/access_to_PSI/final_report.html.

¹² See http://abs.gov.au/websitedbs/D3310114.nsf/Home/%C2%A9+Copyright?opendocument?utm_id=GB.

¹³ See <http://www.ga.gov.au/news/archive/2008/dec/>.

¹⁴ See <http://www.gilf.gov.au/>.

¹⁵ See <http://powerofinformation.wordpress.com/>.

¹⁶ <http://www.whitehouse.gov/copyright/>.