

BUILDING THE INFRASTRUCTURE FOR DATA ACCESS AND REUSE IN COLLABORATIVE RESEARCH: An Analysis of the Legal Context

Dr Anne Fitzgerald, Kylie Pappalardo and others
(June 2007)

Available at: <http://www.oaklaw.qut.edu.au/node/33>

A joint report of the Open Access to Knowledge (OAK) Law Project and the Legal Framework for e-Research Project, both hosted by QUT

- Funded by the Australian Government Department of Education Science and Training (DEST)
- Systemic Infrastructure Initiative (SII) funded projects and part of the Commonwealth Government's *Backing Australia's Ability – An Innovation Action Plan for the Future*

CRICOS No.00213J



OAK LAW PROJECT

BUILDING THE INFRASTRUCTURE FOR DATA ACCESS AND REUSE IN COLLABORATIVE RESEARCH:

LEGAL FRAMEWORK FOR e-RESEARCH PROJECT

AN ANALYSIS OF THE LEGAL CONTEXT.

Dr Anne Fitzgerald and Kylie Pappalardo.
Assisted by Professor Brian Fitzgerald,
Anthony Austin, Dr John Abbott,
Brendan Cosman, Damien O'Brien and
Bill Singleton (Allens Arthur Robinson).

CRICOS No.00213J

BUILDING THE INFRASTRUCTURE FOR DATA ACCESS AND REUSE IN COLLABORATIVE RESEARCH: An Analysis of the Legal Context

- Examines the legal framework in which research data is generated, managed, disseminated, used
- Provides an overview of the areas of law relevant to research data:
 - copyright, contract, confidentiality, privacy, public records, freedom of information etc
- Explains current practices and attitudes to data sharing; considers open access policies developed at national and international levels
- Provides practical guidance and recommendations on the development of appropriate legal frameworks for data management

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 1 – The Data Landscape

“Today’s research community must assume responsibility for building a robust data and information infrastructure for the future.” [ICSU, *Scientific Data and Information: A Report of the CSPR Assessment Panel*, December 2004]

- December 2006 – Australian Research Council (ARC) and National Health and Medical Research Council (NHMRC) announced open access guidelines for data from funded research projects, effective 2008
- Supported by the Australian Government Productivity Commission in *Public Funding for Science and Innovation* (2007)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J




eResearch @ QUT

Chapter 1 – The Data Landscape

- Prime Minister's Science, Engineering and Innovation Council (PMSEIC), Working Group on Data for Science, *From Data to Wisdom: Pathways for Successful Data Management for Australian Science* (December 2006)
- Australian Government National Collaborative Research Infrastructure Strategy (NCRIS), *Strategic Roadmap* (2006)
- Australian Partnership for Sustainable Repositories (APSR), *Sustainable Paths for Data-Intensive Research Communities at the University of Melbourne* (August 2006)
- ,NHMRC/AVCC, *Joint Statement and Guidelines on Research Practice – Australian Code for Responsible Conduct of Research* (2006)

<http://www.oaklaw.qut.edu.au/node/33>
<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J




eResearch @ QUT

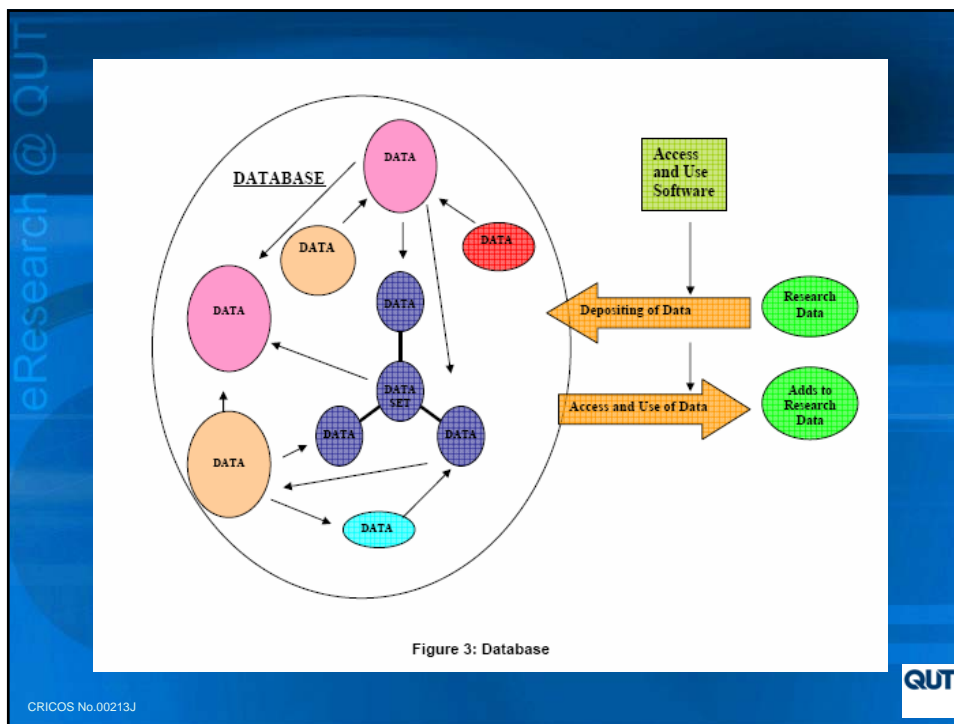
Chapter 2 – Key Concepts

- Key terms and concepts:
 - “data”, “dataset”, “database”
 - “data” includes raw information, text, software, numbers, graphs, pictures, metadata and audio and video recordings
 - “ownership”, “control”, “access” and “use”
- Different parties may claim an interest in relation to data:
 - Researchers who generate or collect data, research funders, database managers, custodians and users
- Several areas of law impact on issues of data ownership, control, access and use:
 - copyright, patent, contract, confidential information and privacy

<http://www.oaklaw.qut.edu.au/node/33>
<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J





Chapter 3 – The Regulatory Context

- “On the one hand information wants to be expensive, because it’s so valuable...On the other hand, information wants to be free, because the cost of getting it out is getting lower and lower all the time.”

[Stewart Brand, Hackers’ Conference in 1984, as quoted by John Perry Barlow in *The Economy of Ideas: A framework for patents and copyrights in the Digital Age (Everything you know about intellectual property is wrong)* (1994), Wired, Issue 2.03]

<http://www.oaklaw.qut.edu.au/node/33>
<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J

Chapter 3 – The Regulatory Context

- Examines the regulatory context in which data is generated, managed and used
- Particular focus on legislative and administrative provisions applying to data generated or held by public sector or publicly funded entities
- Health information and personally identifying information – legal frameworks for information privacy
 - Competing considerations: advancement of medical research (aided by data sharing and data linking practices) vs. protection of patient anonymity and privacy
 - *Privacy Act 1988* (Cth) and State legislation
 - Australian Law Reform Commission (ALRC) Issues Paper 31: Review of Privacy (2006)
 - ALRC Issues Paper 26: Protection of Human Genetic Information (2001)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 3 – The Regulatory Context

- Government Data and Information
 - Public Records and Archives legislation
 - Freedom of Information Acts
 - Electronic Transactions Acts
 - Administrative Arrangements and Information Standards
- Cultural protocols

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 4 – Current Practices and Attitudes to Data Sharing

- Surveys and describes examples of web-accessible United States, European and Australian databases with developed legal arrangements for providing access to and sharing of research data:
 - analyses the various models of data ownership, control, access and use observed in the sample
 - looks at general frameworks as well as subject-specific databases, especially collections of medical and genetic research data
- Considers the relevance of survey evidence of researchers' attitudes on accessibility and sharing of data to the development of systems for technical and legal management of research data

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 4 – Current Practices and Attitudes to Data Sharing

Key databases analysed include:

United States –

- National Institutes of Health (NIH) databases, including GenBank, Genetic Association Information Network (GAIN) and National Human Genome Research Institute (NHGRI)
- National Centre for Biotechnology Information (NCBI) databases, including Database of Genotype and Phenotype (dbGaP)
- Earth System Grid

Europe –

- Mars Climate Database
- Capture Wales

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 4 – Current Practices and Attitudes to Data Sharing

Australia –

- Marine Themes
- Household Income and Labour Dynamics in Australia Survey (HILDA)
- Pacific and Regional Archive for Digital Sources in Endangered Cultures (PARADISEC)
- Australian Social Science Data Archive (ASSDA)
- Western Australian Genetic Epidemiology Resource (WAGER)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 4 – Current Practices and Attitudes to Data Sharing

Surveys of researchers' attitudes -

- APSR Australian eResearch Sustainability Survey
- NCRIS Platforms for Collaboration Data Management Survey
- QUT e-Research Survey (report forthcoming)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 5 - Copyright

- Overview of basic principles of copyright law in relation to data/datasets/databases:
 - copyright in compilations (“literary works” heading)
 - In Australia: *Desktop Marketing System Pty Ltd v Telstra Corporation Pty Ltd* (2002, Full Federal Court)
 - of United States position: *Feist Publications Inc v Rural Telephone Service Co Inc* (1991)
 - European Union Database Directive
- Extension of copyright protection for digital materials available online:
 - Electronic communication right (transmit/make available)
 - Protection for Digital Rights Management (DRM) technologies and Electronic Rights Management Information (ERMI)
- Copyright licensing, including:
 - Open content licences – Creative Commons, Science Commons
 - Statutory licences – position of government as owner and user of copyright (“Crown copyright”)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 6 – Confidential Information

- Explains when data or information which is confidential or secret can be legally protected
- Doctrine of confidentiality (action for breach of confidence) can be used to control and limit access to data that has not been publicly disseminated and is not public knowledge
- Considers some special cases:
 - information acquired during the course of employment (trade secrets)
 - information held by government
- Use of contracts to maintain secrecy (“Confidentiality agreements”)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 7 - Contract

- Considers various contractual arrangements relevant to the protection and sharing of data and information
- Use of contracts:
 - to protect confidentiality or commercial interests
 - assign copyright
 - grant copyright licences
 - control access to and use of data
 - impose restrictions on re-use of data for specific purposes or projects (downstream uses)
- provides diagrammatic examples to illustrate contractual arrangements

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J

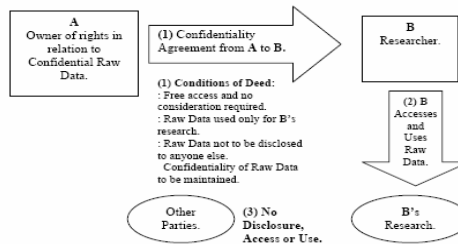


Example 1: Basic Confidentiality Agreement for Use of Research Data

Parties and Roles:

- A is the owner of rights in relation to a confidential collection of raw data. The raw data is not protected by copyright, because it does not meet the originality threshold required for copyright protection to apply.
- B is a researcher who wishes to use A's raw data in B's research.
- A and B agree to let B have access to A's data without charge, on the condition that confidentiality is maintained.

Basic Confidentiality Agreement for Use of Research Data Diagram:



Example 1 - Steps Taken:

- (1) A grants B the right under a Confidentiality Agreement to use the raw data in B's research. A's access and use is free, the confidentiality agreement is made as an enforceable deed. The conditions are that B only uses the raw data for certain research purposes, that B does not disclose the raw data to anyone else and that B keeps the raw data confidential.
- (2) B accesses and uses A's raw data in B's research and ensures that there is no disclosure, access to or use of the data by other parties (3).

CRICOS No.00213J



eResearch @ QUT

Example 4: Access Content Licence - Owner and User

Parties and Roles:

- A is the owner of rights, including copyright, in relation to a dataset.
- B is the managing entity of an open access database which is accessible by users on a worldwide basis without charge. B is not obliged to maintain the confidentiality of submitted data or to enter into licences with users for their access and use of the data.
- C, D and E are members of the research community who wish to access A's dataset from B's database and to use it for each of their own research projects.
- A agrees that A's dataset will be deposited into B's database and reproduced on the database for access by any users. A does not impose any restrictions or conditions on access and use of the data, other than those contained in a Creative Commons open content licence attached to the dataset by A before providing it to B.

Open Access Content Licence – Owner and User Diagram:

(5) Separate open access Creative Commons Licences between A and C,D and E.

QUT

CRICOS No.00213J

eResearch @ QUT

Chapter 8 – Data Sharing Frameworks

- Provides an overview of open access policies and principles specifically relating to research data, developed at national and international levels and by private research organisations
- International:
 - Bermuda Principles
 - Berlin Declaration on Open Access to Knowledge in Science and the Humanities
 - Organisation for Economic Co-operation and Development (OECD) Declaration on Access to Research Data from Public Funding

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

QUT

CRICOS No.00213J

Chapter 8 – Data Sharing Frameworks

- National - governments and public sector research funding bodies:
 - National Institutes of Health (NIH) Data Sharing Policy; and
 - Australian Research Council (ARC) and National Health and Medical Research Council (NHMRC) funding policies.
- Private sector research organisations:
 - Wellcome Trust Position Statement (UK)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 9 – Data Sharing Infrastructure

“The scientific community can and must assert greater control over the management of its own data supplies.” [J Reichmann and P Uhler, *A Contractually Reconstructed Research Commons for Scientific Data in a Highly Protectionist Intellectual Property Environment* (2003) 66 *Law and Contemporary Problems* 315]

- Considers steps to take in developing legal frameworks for data management in the Australian research context
- In developing effective frameworks for the management of research data, the following steps are proposed:
 - formulate a Data Access Policy and Principles;
 - identify the specific kinds of data to be made available for access and use;
 - ascertain the conditions of access and use; and
 - adopt mechanisms for practical data management, such as a Data Management Plan (DMP) and a Data Management Toolkit (DMT)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 9 – Data Sharing Infrastructure

Data Management Plan (DMP) –

- how data is managed in accordance with relevant legal controls
- how data is preserved and maintained and how this is funded
- who is responsible for the management of data and the database

Data Management Toolkit (DMT) –

- guides researchers in the allocation and handling of data in accordance with the DMP
- how to deposit data into the database
- how to manage data in compliance with legal requirements

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 10 – Conclusions and Recommendations

“We are going to be deluged with data in almost every field.”

[Tony Hey in Richard Poynder (2006) *A Conversation with Microsoft's Tony Hey*]

- Proposes steps to be taken on the development of data access policies, principles and practices for guidance of researchers
- Proposal 1: Analysis of Data Access and Sharing Practices
 - further analysis of databases such as those described in Chapter 4 to ascertain approaches and policies to data sharing and licensing terms used
 - develop standard models and templates for research data frameworks addressing intellectual property rights and other legal arrangements
- Proposal 2: Analysis of Open Access Policies and Principles
 - conduct further comparative examination of policies, principles and guidelines on open access to research data, as described in Chapter 8
 - examine how open access policies and principles are reflected in data access and sharing practices (Chapter 8 and Chapter 4)

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J



Chapter 10 – Conclusions and Recommendations

- Proposal 3: Develop Data Access Policies and Principles and Model Data Management Plans, Toolkits and Templates
 - Policies and principles to provide clear statements on open access to research data
 - Data Management Plans (DMP) to assist in management, preservation and maintenance of data in accordance with relevant legal requirements
 - Data Management Toolkit (DMT) to provide practical guidance to researchers on how to collect, manage and deposit data
 - Template Access Agreements and Repository Deposit Licences consistent with the DMP and DMT

<http://www.oaklaw.qut.edu.au/node/33>

<http://www.e-research.law.qut.edu.au/node/14>

CRICOS No.00213J

