

CONFERENCE REPORT

AUSTRALIAN NATIONAL SUMMIT ON OPEN ACCESS TO PUBLIC SECTOR INFORMATION

Brisbane, Queensland

13 July 2007



**Queensland
Government**

Queensland Spatial Information Council – Smart Spatial Solutions for Queensland
www.qsic.qld.gov.au

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1. Introduction

The rise of a network information society has increased the scope for accessing and reusing digital information. In fact, an ability to access and reuse information – whether that be in the government, research, cultural, community or commercial sectors – is nowadays acknowledged as a competitive advantage in being able to provide social and economic innovation.

It is no surprise that in this environment governments throughout the world are eager to find ways in which government and citizens alike can better access, reuse and repurpose publicly funded information. The Australian National Summit on Open Access to Public Sector Information (PSI), held on 13 July 2007 in Brisbane at Queensland Parliament House, was designed to bring together leading actors in this area from around the country and around the world and to have them share their expertise, recount their experiences and chart a plan for future activity.

Much had already been achieved. Our respective institutions – the Queensland Government and the Queensland University of Technology (QUT) Law Faculty – through the [Queensland Government Information Licensing Framework Project Team](#) (involving Dr Peter Crossman, Tim Barker and Neale Hooper) and the [OAK Law Project](#) (funded by the Australian Department of Education, Science and Training and led by Professor Brian Fitzgerald) have done a significant amount of work in mapping issues and providing strategies for the future. But we are not alone. Agencies such as the Australian Bureau of Statistics (Steve Matheson), scholars and notable Australians such as Professor Fiona Stanley, Professor Mary O’Kane, Dr Terry Cutler and Dr Anne Fitzgerald, international specialists Paul Uhler, Claire Driscoll, John Wilbanks and Dr Chris Greer from the United States and Fred Friend from the United Kingdom have all laboured in this field. Our desire was to harness the insights of such a group as part of building support for and implementing a policy of better access to PSI in the name of innovation. We chose to do this in the form of a national congress or summit.

By design we organised for the Summit to be held in tandem with a two-day conference, *Legal Framework for e-Research*, convened by QUT at the Gold Coast on 11 and 12 July 2007.¹ Several of the speakers at the Summit – Professor Fiona Stanley, Paul Uhler, John Wilbanks, Dr Chris Greer and Claire Driscoll – also made presentations at the *Legal Framework for e-Research* conference.

The hallmarks of the Summit were a willingness of participants to engage with the issue of access and reuse as a matter of priority and good sense, and an enthusiasm to find sensible and effective pathways to implementing policies and practices that can realise the potential of what the technology combined with the vast data stores offers every member of the community in terms of better health, recreation, education and prosperity.

What follows in this Report is an overview of the proceedings of the Summit. In an event like this it is important to create a record of the activities that can be shared with others in a process of understanding, reflection, improvement and consensus building. This Report has three major sections:

- Section 2 sets out the Summit Program.
- Section 3 contains a list of all participants.
- Section 4 provides abstracts of presentations together with links to full versions of presentations, key websites and resource materials.

The Summit participants were in agreement that there should be a public statement to emanate from the proceedings. Section 5 contains the Stanley Declaration, named after the former

¹ For details, see <http://www.e-research.law.qut.edu.au/conference>

County of Stanley in the City of Brisbane, in which the Queensland Parliament – the venue for the Summit – is located.

Our aim was not only to facilitate a high level of discussion around the critical issue of access and reuse of PSI but to also come away from this meeting with a tangible outcome for the future. To this end, much of the afternoon was spent workshopping ideas. Interestingly, a broad consensus emerged in favour of the following principles:

- the benefits to be derived from the adoption and implementation by governments of an open access policy subject to proper protection of private and other restricted information
- the benefits of Creative Commons (CC) open content licences for the majority of PSI which is unaffected by privacy or other restricting factors
- open access to PSI leads to the realisation of the information's full social, cultural, environmental, civil society, and commercial potential.

We trust you will enjoy the discussion as recorded in the following pages and encourage any person or institution that is interested in these issues to contact us.

Tim Barker, Assistant Government Statistician, Office of Economic and Statistical Research, Queensland Treasury

and

Professor Brian Fitzgerald, Professor of Intellectual Property and Innovation, Faculty of Law, Queensland University of Technology.

2. Summit Program

AUSTRALIAN NATIONAL SUMMIT ON OPEN ACCESS TO PUBLIC SECTOR INFORMATION

8:30am – 5:00pm 13 July 2007, Premier's and Speaker's Rooms
Queensland Parliamentary Annex, George St, Brisbane

SUMMIT PROGRAM

8:30am **Session One:**

Official Welcome

Gerard Bradley, Under Treasurer and Under Secretary of the Queensland State Government

Overview and Goals for the Day

Conference Chair – Prof Brian Fitzgerald

Open Access to PSI – The Rationale

Prof Fiona Stanley, Director, Telethon Institute for Child Health Research

9:15am **Session Two:**

Open Access to PSI – The Fundamentals

Chair – Tim Barker, OESR, Qld Treasury

The Economics of Open Access to PSI

Antony Skinner, Director-Economics and Deputy Government Statistician, Qld Treasury

The Legal Principles of Open Access to PSI

Dr Anne Fitzgerald, Adjunct Professor, QUT

The OECD and International Initiatives

Paul Uhler – Director of International Scientific and Technical (S&T) Information Programs, USA National Academies

The Commerce of Open Access to PSI

Michael Easton, Chairman ASIBA

11:00am Morning Tea

11:30am **Session Three:**

Open Access to PSI – Case Study Vignettes

Chair – Steve Jacoby (Chair QSIC)

Steve Jacoby – ANZLIC, Data Leadership

John Wilbanks – USA, Science Commons

Neale Hooper – Qld, GILF

Steve Matheson – ABS, NDN

Emily Whitten – AGIMO, NISS

Claire Driscoll – NIH, USA, Data Policy

Ben Searle – Geosciences Aust, Data Pricing

1:00pm Lunch

1:45pm **Session Four:**

Open Access to PSI – The Content

Chair – Peter Woodgate, CEO CRC for Spatial Information

Creativity and Open Access to PSI

Dr Terry Cutler, Cutler and Company, and Board Member CSIRO

The Data Universe

Dr Chris Greer, Program Director

Cyberinfrastructure, NSF, USA

2:30pm **Session Five:**

Open Access to PSI Future and Direction Workshop

Chair – Neale Hooper, OESR, Qld Treasury

Report on E-Research Future Vision

Prof Mary O'Kane, Chair CRC for Spatial Information

PSI Future Vision

Group 1

Facilitator Steve Matheson

Reflections/Insights Paul Uhler

Rapporteur Neale Hooper

Group 2

Facilitator Jack de Lange

Reflections/Insights Dr Chris Greer

Rapporteur Tim Barker

Group 3

Facilitator Wayne Fry

Reflections/Insights John Wilbanks

Rapporteur Dr Anne Fitzgerald

Group 4

Facilitator John Hayes

Reflections/Insights Dr Terry Cutler

Rapporteur Dr John Cook

3:20pm Afternoon Tea

3:30pm **Session Five continued**

How to Get There

Group 1 Discussion

Group 2 Discussion

Group 3 Discussion

Group 4 Discussion

Group Summaries by Rapporteurs

4:30pm **Summary and Thanks**

Dr John Cook, OESR, Qld Treasury

5.00pm Close

3. List of Participants

Genuine gratitude is extended to all participants and special thanks are extended to those participants who travelled vast distances both within Australia and from overseas, especially the international speakers, to be at the Summit.

Title	First Name	Surname	Department	State
Mr	Tim	Barker	Office of Economic and Statistical Research	QLD
Mr	Ian	Batley	ANZLIC the Spatial Information Council	ACT
Mr	Tim	Beale	Queensland University of Technology, Faculty of Law	QLD
Ms	Margot	Bell	Department of Education, Science and Training	ACT
Mr	Robert	Bischof	Department of Local Government, Planning, Sport and Recreation	QLD
Ms	Kathryn	Boersma	Office of Economic and Statistical Research	QLD
Mr	Andy	Bond	National E-Health Transition Authority Nehta	ACT
Ms	Jenny	Bopp	Office of Economic and Statistical Research	QLD
Mr	Brendan	Boyle	Land Information New Zealand	NZ
Mr	Michael	Boyle	Environmental Protection Agency	QLD
Dr	Tony	Callaghan	Department of State Development	QLD
Mr	Alan	Chapman	Department of Public Works	QLD
Ms	Jessica	Coates	Queensland University of Technology, Faculty of Law	QLD
Dr	John	Cook	Office of Economic and Statistical Research	QLD
Mr	Brendan	Cosman	Queensland University of Technology	QLD
Dr	Terry	Cutler	Cutler and Company Pty Ltd	QLD
Mr	Jack	de Lange	The Australian Spatial Information Business Association	QLD
Ms	Claire	Driscoll	Technology Transfer for the National Human Genome Research Institute (NHGRI, NIH), Washington, D.C.	USA
Ms	Heather	Drummond	Department of Primary Industries & Fisheries	QLD
Mr	Michael	Easton	Australian Spatial Industry Business Association	QLD
Dr	Richard	Eden	Department of Education, Training and the Arts	QLD
Dr	Anne	Fitzgerald	Queensland University of Technology, Faculty of Law	QLD
Prof	Brian	Fitzgerald	Queensland University of Technology, Faculty of Law	QLD
Mr	Fred	Friend	Scholarly Communications Group Consultant, Institution JISC	UK
Mr	Wayne	Fry	Department of Natural Resources and Water	QLD
Mr	Peter	Gersekowski	Office of Economic and Statistical Research	QLD
Dr	Chris	Greer	National Science Foundation (NSF), Arlington, VA.	USA
Mr	Peter	Handsaker	Innovation Economy Advisory Board	VIC
Dr	John	Hayes	Queensland University of Technology	QLD

FOR DISCUSSION PURPOSES ONLY – NOT GOVERNMENT POLICY

Title	First Name	Surname	Department	State
Mr	Peter	Holland	Australian Government Geoscience Australia	ACT
Mr	Neal	Hooper	Office of Economic and Statistical Research	QLD
Mr	Steve	Jacoby	Department of Natural Resources and Water	QLD
Mr	Scott	Kiel-Christholm	Queensland University of Technology	QLD
Mr	Steve	Matheson	Australian Bureau of Statistics	ACT
Mr	John	Meyer	ACT Planning & Land Authority	ACT
Mr	Raymond	Moore	Department of Primary Industries & Fisheries	QLD
Ms	Miranda	Mortlock	Office of Economic and Statistical Research	QLD
Prof	Bruce	Muirhead	EIDOS Institute Ltd, Institute for Ideas for Social and Economic Change	QLD
Prof	Mary	O'Kane	Mary O'Kane and Associates Pty Ltd	NSW
Prof	Mark	Perry	University of Western Ontario	CAN
Ms	Connie	Prince	Office of Economic and Statistical Research	QLD
Ms	Janet	Prowse	Qld State Archives	QLD
Mr	Geoff	Renton	Department of Justice and Attorney-General	QLD
Mr	Graham	Reynolds	Department of Education, Science and Training	ACT
Mr	Wayne	Richards	Australian Bureau of Statistics	ACT
Ms	Trish	Santin-Dore	Office of Economic and Statistical Research	QLD
Mr	Ben	Searle	Office of Spatial Data Management	ACT
Mr	Grahame	Searle	Department of Land Information	WA
Mr	Gary	Shaw	Information Queensland	QLD
Ms	Carla	Simpson	Office of Economic and Statistical Research	QLD
Mr	Antony	Skinner	Office of Economic and Statistical Research	QLD
Prof	Fiona	Stanley	Telethon Institute for Child Health Research	WA
Mr	Alex	Stefan	Department of Emergency Services	QLD
Mr	David	Teufel	Department of Natural Resources and Water	QLD
Mr	David	Torpie	Office of Economic and Statistical Research	QLD
Ass.Prof	Juhani	Tuovien	University of the Sunshine Coast	QLD
Mr	Paul	Uhlir	The National Academies in Washington, D.C.	USA
Ms	Emily	Whitten	Australian Government Information Management Office	ACT
Mr	John	Wilbanks	Science Commons	USA
Mr	Peter	Woodgate	Corporate Research Centre for Spatial Information	VIC

4. Record of Presentations²

4.1 Open Access to PSI – The Rationale

[Professor Fiona Stanley](#), Director, Telethon Institute for Child Health Research

There are many and varied significant reasons supporting open access to PSI including:

- Building modern democracies and civil societies (which respect human rights)
- Empowering citizens by fostering greater accountability of governments
- Improved governance and a culture of accountability
- Facilitating sustainable development and the identification of inequalities in society
- Identifying demographic changes, work patterns and migration
- Identifying climate change, biodiversity, technology, energy and water data
- Identifying the world's children, families, poverty and gender differences
- Identifying health and education needs
- Identifying the impact of globalisation including economic, corporate sector and the role of non-government bodies.

The timely access to PSI, including the different types outlined above such as identifying the world's children, families, poverty and gender differences, will greatly facilitate better informed policy formulation generally through the recognised sequence of data to knowledge and then to informed policies. For example, the prospects for better health outcomes for the world's poverty-stricken children are significantly increased if accurate statistics and information are available, which will lead to greater understanding and knowledge which in turn will enable better informed policies to be formulated by governments and international organisations such as the UN's World Health Organisation seeking to address the major health and societal challenges. The implementation of the informed policies will then lead to improved outcomes. It is clear that more data is needed on these numerous strategic issues than is presently available and open access is an important means by which this strategic goal of greater access and knowledge may be achieved.

The second World Forum on Statistics, Knowledge and Policy, held on 27-30 June 2007 and which Professor Fiona Stanley attended, resulted in the [Istanbul Declaration](#) which has been endorsed by the European Commission, the OECD, the UN and the World Bank. The Declaration endorsed the informed and progressive view that "Official statistics are a key "public good" that foster the progress of societies".

Of timely relevance in the context of societal progress generally is the 2004 passage attributed to Professor Lawrence O. Gostin of the University of Georgetown namely, "In the late 20th century, scholars and politicians posed a key question: 'What desires and needs do you have as an autonomous rights bearing person to privacy, liberty and free enterprise?' Now it is important to ask another kind of question: 'What kind of community do you want and deserve to live in and what personal interests are you willing to forgo to achieve a good and healthy society?'" The ultimate answer delivered by society to this question will have significant bearing on the nature and scope of the benefits which are clearly available under an open access policy to PSI.

²The powerpoint presentation of each presenter can be viewed at <http://datasmart.oesr.qld.gov.au/Events/datasmart.nsf/0/CD8D2AF82A2007D34A25732C0006F9AE?OpenDocument>

Fundamental issues of great public good are at stake and these must be kept clearly in mind when making out the powerful case in favour of open access to PSI.

4.2 Open Access to PSI – The Fundamentals

4.2.1 The Economics of Open Access to PSI

[Antony Skinner](#), Director-Economics and Deputy Government Statistician, Queensland Treasury

It is generally accepted that economic growth is fundamental to increasing the prosperity and well-being of the community. Economic growth occurs in two ways. One is by adding more inputs or factors of production. The other is to do things better with a given level of production factors (i.e. productivity).

Factors of production are typically thought of as land, capital and labour. Adding more of these factors is relatively easy. A simple example is growth in Queensland based on more migrants. By contrast, improving productivity is more challenging. Here the drivers of productivity are policies and/or practices that can change our stock and usage of factors of production.

When analysing productivity drivers, typically the focus is on factors for which there is good specification and measurement e.g. labour. Those factors for which specification is poor and measurement non-existent are lumped together to form a “residual”. The traditional approach of economists to residuals is less than satisfactory. The question that arises is where does information fit in the analysis of productivity drivers?

When one takes into account the role that information plays in decision making, policy making, planning, and performance evaluation it is clear that information is an enabler of productivity. However, this role can only be performed efficiently and effectively if information policies and practices (the drivers) are set appropriately to improve the supply of information.

Statistics are produced (either by direct collection or as by-products from the production process) as long as the return on investment from the statistics at the margin is higher than for any other alternative use of those resources. The investment in by-product statistics results in two kinds of information: information which is appropriable and that which is not. Appropriable statistics are restricted to an agency’s own use, where use by others is excluded and the statistics are used to generate profits. Non-appropriable statistics are used for the public good. The characteristics of non-appropriable statistics include being non-rivalrous (that is use by one agent does not preclude the use by another) and non-excludable (that is, it is difficult to prevent other agents from using them).

The public sector has the potential to make available a vast array of by-product statistics. These statistics are certainly non-rivalrous and can only be excludable by choice. The marginal cost of collecting and managing by-product statistics from ICT systems is very low. So what else would cause public sector information to be excludable?

Is there an element of latency to the supply of public sector information (PSI) via by-product statistics? Is there market failure operating on the supply side of PSI? External factors may include privacy concerns. Monopolies – information markets have high fixed costs (e.g. collection) and low variable costs (dissemination). The

legal application of property rights to information assets can result in the owners acting as price discriminating monopolists.

There is always room for more and better statistics. From a Queensland perspective, there are deficiencies in the supply of statistics, particularly at the regional level. It is for this reason that the Queensland Government continues to have its own statistical infrastructure and has acted to bring together the parallel information universes (e.g. spatial and statistical). Other evidence of demand pressures include data matching by university based research, and research into e-health solutions.

Whether it is latency or market failure limiting the supply of PSI, a full and systematic review of the drivers (policies and practices) which govern the creation of statistical enablers is necessary.

Some first steps include:

- Negotiate, develop and implement national solutions – respect and include all levels of government, the private sector and the community
- Negotiate and develop comprehensive legislative and operational solutions for privacy protection
- Deliver increased transparency of statistical quality and quantity through a system of metadata registration
- Clarify information property rights to limit monopolistic behaviour.

An instructive example from the US is provided by the Confidential Information Protection and Statistical Efficiency Act 2002. This legislation addressed the problem that individual federal statistical agencies must separately collect information from the public on the same subject matter because they were prevented by law from sharing. The Act established a regime which authorised data sharing amongst specified statistical agencies on clearly defined terms which protect privacy.

This example provides a potentially useful approach to data sharing of certain information/statistics in Australia, whether between and amongst all jurisdictions, and for both direct collection and by-products.

Some progress is evident in Australia with the leading projects including changes to the Australian Bureau of Statistics (ABS) pricing policy, through the removal of cost as a barrier to accessing information; National Data Network, with leadership being provided by ABS and support from the information community on the need to improve the supply of statistics; and Government Information Licensing Framework (GILF), where the Queensland Government (through the Office of Economic and Statistical Research – OESR) is developing a Creative Commons based (open content licences) approach to information licensing.

Society uses statistics all the time. Statistics are the fundamental enablers of innovation and hence economic growth and prosperity. The quality and quantity of statistics can and should be improved in simple, achievable and cheap ways. By looking for solutions on a national basis the whole community will benefit. Through innovative reform of statistical policies and practices, statistics will then be better able to drive innovation itself.

4.2.2 The Legal Principles of Open Access to PSI

[Dr Anne Fitzgerald](#), Adjunct Professor, Queensland University of Technology

In the legal context, the use of open content licensing to create a public domain of knowledge is of great strategic importance. In traditional copyright terms, “public domain” refers to materials which were at one time protected by copyright but whose period of protection had expired – for example Shakespeare’s plays - as well as matters which have never attracted copyright protection – for example facts and information. However, in view of the changing role of knowledge in society and the economy, the concept of “public domain” is being recast more broadly to mean “open” knowledge – that is, ideas and information that can be readily accessed, redistributed and reused. The public domain of openly accessible knowledge encompasses materials which are protected by copyright but are made available for access and reuse under, for example, open source software, and open content licences, including Creative Commons licences.

Based on this broader conceptualisation of “public domain”, much of the effort that is currently being directed at improving access to public sector information is not driven by an assumption that promoting access is best achieved by removing such materials from copyright protection. To the contrary, there is a growing awareness that the key to facilitating access to public sector materials revolves not so much around the issues of subsistence and ownership of copyright, but depends rather on the licensing and pricing arrangements for access to and reuse of the material.

In addition to the general copyright ownership and use provisions in the Copyright Act 1968, there are specific Crown copyright provisions (ss 176-179) which apply specifically to the Federal and State governments in Australia. The ability of governments to use open content licences to provide open access to PSI is dependent upon the subsistence of copyright in the relevant PSI.

Under Australian copyright law only a low threshold of creativity is required in order to establish the subsistence of copyright in databases. What is commonly referred to as “sweat of the brow” or some effort or labour expended is often sufficient to give rise to copyright. Accordingly most databases, including those consisting of PSI, will be protected under Australian law as copyright works.

4.2.3 The OECD and International Initiatives

[Paul Uhler](#), Director of International Scientific and Technical (S&T) Information Programs, USA National Academies

The compelling reasons for placing government generated data and information in the public domain or under common use conditions (e.g. standardised open content licences) involve legal, socioeconomic, ethical and political considerations. The legitimate restrictions on the public’s access to PSI include national security and public safety, personal privacy and confidentiality obligations.

The recently revised [OECD Principles and Guidelines for Access to Research Data from Public Funding](#) addresses the access and legitimate restriction issues in some detail.

The Principles and Guidelines provide broad policy recommendations to the governmental, science policy and funding bodies of OECD member countries on access to research data from public funding. They are intended to promote data access and sharing among researchers, research institutions, and national research

agencies while, at the same time, recognising and taking into account the various national laws, research policies and organisational structures of OECD member countries.

The ultimate goal of the Principles and Guidelines is to improve the efficiency and effectiveness of the global science system. The Principles address the following: openness, flexibility, transparency, legal conformity, protection of intellectual property, formal responsibility, professionalism, interoperability, quality, security, efficiency, accountability and sustainability.

There is currently a lack of research on the economic impacts of different PSI policies and a lack of strong theoretical models and methodologies. The US Committee for CODATA and the OECD are convening a workshop to address these significant matters in early 2008.

4.2.4 The Commerce of Open Access to PSI

[Michael Easton](#), Chairman, Australian Spatial Information Bureau of Australia (ASIBA)

ASIBA represents the interests of the business sector of the Spatial Information Industry. Spatial or geographic information “is information which can be related to specific locations on the Earth”. In fact, spatial information is ubiquitous and “more than 80% of data regularly worked with in Government contains a location component”.

One of ASIBA’s objectives is “to influence the business environment so that the [spatial information] industry can be commercially successful, internationally competitive and sustainable”.

ASIBA encourages policy makers and influencers across all Australian jurisdictions and all levels of government to expedite their work towards implementing consistent open access to PSI throughout Australia, whether that work be under the National Water Initiative (NWI), the development of the National Information Sharing Strategy (NISS) recently endorsed by Ministers from all States and the Australian Government through the Ministerial Online and Communications Council in relation to Spatially Enabled Government, or otherwise.

The impact on the private sector, and the spatial information industry in particular, of governments adopting policies supporting open access to PSI will be far-reaching and difficult to predict with any real certainty. What is clear, however, is that open access will result in a major re-appraisal of business models underpinning current business practices and careful review of current information product lines.

Not only will open access impact on the private sector in the way in which it currently accesses PSI, and secures rights to reuse PSI, but also on the way in which the spatial information industry is to provide information to governments for inclusion in various strategic mapping and other databases. There are also important potential financial implications for industry in that current pricing models will need to be reviewed in the context of open access where government is intending to make information available more broadly than at present and also presumably more often free of charge.

The essential conditions for commerce to flourish include access to data (that is, search ability and online access/licences), clear rights of use and quality of data, ability to make a profit by value adding, and skilled and knowledgeable personnel. The fundamentals around technology, law and policy need to be coordinated to

maximise the extent to which there may be value adding and the extent to which data may be integrated.

As part of ASIBA's support of the policy of open access to PSI, it endorses the recommendations contained in the Government Information and Open Content Licensing: An Access and Use Strategy document (Government Information Licensing Framework (GILF) Stage 2 Report, October 2006).

4.3 Open Access to PSI – Case Studies

4.3.1 Data Leadership

[Steve Jacoby](#), ANZLIC

ANZLIC, through its leadership role, seeks change in government access policies towards a more open access approach and seeks solutions on a whole of government basis to the barrier represented by non-standard or incompatible licences, and rights of use, currently being used and granted across government agencies and jurisdictions. These reforms would be facilitated by more standardised (that is, compatible) licences and a more open access policy approach by government to PSI. The reforms sought are with a view to delivering on ANZLIC's objective of securing easy and cost effective access to the wealth of spatial data and services in the public and private sectors. Open access to PSI, including the use of standard licences wherever practicable, including the use of open content licences, would assist in achieving this key goal of ANZLIC.

ANZLIC has identified key factors relevant to facilitating access to required data that is getting the right information to the right people in a timely manner. These include:

- Data exists and is usually discoverable (metadata)
- Data is mostly digital (albeit in various formats)
- Data is of varying quality, coverage and resolution
- Data can be large and awkward to handle (bandwidth, cpu)
- Data requires interpretation, analysis, and decision support.

These various factors are largely technology issues and therefore solvable provided, significantly, that access is in fact available to the required data. In this context it is clear that removing barriers to access by establishing the right government policy settings is of central importance.

4.3.2 Science Commons USA

[John Wilbanks](#), CEO Science Commons USA

This presentation argued that information and its collection should be designed for reuse. Significantly, the network principles underpinning the internet now also apply to information and content. Some key internet concepts of relevance in this context are: www: "view source", open linking, standard languages; internet: "end to end", open connection, standard protocols; and the rule of least power: powerful languages inhibit information reuse.

The development and implementation of technical, legal and policy standards allow the "compatible communication" in information and content networks. Importantly, the access to PSI in standard technical and legal forms (e.g. licences such as open content licences) enables dramatic innovation to occur not only in scientific research but in almost all other fields of human endeavour.

Huntington's Disease (HD) research was given as an example to illustrate the issues raised in this presentation. Years of research have led to an enormous amount of knowledge about HD and the associated complex circuitry in the human brain. It was argued that there is a pressing need to find some way in which to manage knowledge better than the current method, which is to have humans read it and humans search databases. Google doesn't work that well, since Google looks at vast information spaces with lots of hyperlinks, and that's not how scientists publish their work. There is a lot of implicit cross-referencing inside these articles, but not a lot of computer links. They cite each other, but citation has a lot of social pressures on it as a process that linking doesn't, and therefore skewed results are delivered. This is more like searching the web pre-Google, except the penalty for getting it wrong is years of work on an idea that has already been proven wrong.

The model identified as a way forward to managing this enormous amount of knowledge is an approach currently being undertaken by large pharma companies and commercial publishers of scientific information, to a greater or lesser extent. The model has been shown to have real power and its development is relatively well advanced. Extracts of papers on this are contained in Medline, a US government supported database which is free of charge. Significantly, this model has not been done in an open source, peer production, Wikipedia or the like manner to date. Science Commons is now engaging in and funding work to further the development of this model in open source so that ultimately it will be readily available.

This advance holds the real prospect of greatly promoting access to PSI in standard technical and legal forms thus enabling dramatic innovation to occur. The adoption of broadly recognised standards or protocols in technology, law and policy will greatly facilitate designs which result in highly desirable compatible communications and reuse of content and information via the internet.

4.3.3 Government Information Licensing Framework (GILF)

[Neale Hooper](#), Principal Counsel, Office of Economic and Statistical Research, Queensland Treasury

Information Queensland (IQ) and the Queensland Spatial Information Council (QSIC) sponsored the Government Information Licensing Framework Project (the GILF project) to update licensing arrangements used within the Queensland Government and the wider spatial industry.

In Stage 1 of the GILF project, an examination of then current access and licensing practices adopted by the various government agencies led to the conclusion that open content licensing, and the Creative Commons (CC) open content licensing model in particular, could be used to meet approximately 85% of Queensland Government licensing arrangements.

Under Australian copyright law, copyright subsists in most databases including agency databases comprised of public sector information (PSI). In general terms, open content licensing, and CC in particular, actively use copyright as the legal basis upon which to grant broad rights of reuse.

The findings from Stage 1 of the GILF project resulted in the endorsement by QSIC and the Information Queensland Steering Committee (IQSC) of an open content licensing model, based on Creative Commons (CC).

Stage 2 was established to create a framework for the Queensland Government to support data and information access and use between Queensland Government agencies, between the Queensland Government and other government jurisdictions, between the Queensland Government and the private sector, and to the community. The framework will confirm the Queensland Government as a single business entity and establish standardised terms, conditions and rules for information transactions to support strategic information access and use in the delivery of government priorities.

The Stage 2 Report contains the following passage:

“Other jurisdictions in Australia and overseas are moving to more open access and use arrangements to support social and economic development, and are introducing policies and principles and implementing appropriate licences to support this move. Background research during Stage 2 resulted in the recommendation that the Queensland Government also move to open access and use arrangements, balanced with appropriate protection for private and confidential information collected or held by government.” (para 1.4 in Executive Summary at page 1)

The Stage 2 Report also contains the following recommendation:

“That the Queensland Government establish a policy position that, while ensuring that confidential, security classified and private information collected and held by government continues to be appropriately protected, enables greater use and re-use of other publicly available government data and facilitates data-sharing arrangements.” (para 2.1 in Recommendations at page 1)

Feedback received through extensive consultation workshops conducted with agencies identified a clear demand for simpler, formal and standardised licences. Extensive consultations have also been conducted with Federal government agencies, such as the ABS and AGIMO, as well as the private sector, including with ASIBA.

The project included a review of the Digital Licensing Management (DLM) component which embeds an electronic watermark (metadata and licence) into licensed data on download.

In relation to the 15% of public sector information (PSI) affected by restricting considerations, the Stage 2 report contained the recommendation that: “A limited number of standard templates be developed to support information-licensing transactions relating to confidential or private information or information with commercial value and for which the CC model is not appropriate”.

Further work has been undertaken in Stage 3 to progress the Government Information Licensing Framework including developing a business case for implementing a licensing framework in Queensland, legal drafting relating to a restrictive licence, and developing technical systems for Digital Licensing Management (DLM).

Supportive legal, economic and policy research is now being advanced further under the auspices of the Cooperative Research Centre for Spatial Information (CRC-SI).

The full potential of public sector information, the creation, compilation and maintenance of which has been paid for by taxpayers, is only realised through its extensive reuse, and not principally by the extraction of fees and rents. Open access to public sector information, subject to appropriate protection for confidential, security classified and private information, is the means by which the social, cultural, environmental, civil society, and commercial potential of PSI may be realised.

This conclusion is entirely consistent with recent national and international developments on open access in relation to PSI, for example, the recently revised OECD Principles and Guidelines for Access to Research Data from Public Funding,

the (US) National Institutes of Health's funding conditions (requirement to make the biological research results under its Human Genome Project openly available), and Science Commons.

4.3.4 National Data Network (NDN)

[Steve Matheson](#), Australian Bureau of Statistics (ABS)

The National Data Network (NDN) Consortium was formed by the Australian Bureau of Statistics (ABS) with commitment to the following principles:

- Data should be managed as an asset and be exposed as broadly as practicable
- Data should be used responsibly and in accordance with any conditions specified by the custodian, the privacy principles and all applicable laws
- The quality of the data should be described clearly and understandably
- Work collaboratively, and avoid duplication of effort in the creation, management and use of information resources.

The NDN is an internet-based distributed network providing:

- cataloguing and controlled sharing of information resources
- platform for collaboration – data analysis, development of tools/services
- “externalisation kit”
- open source software, free-of-charge
- data management/quality framework based on AGLS/Dublin Core
- Shibboleth federated identity management
- Creative Commons enabled
- administrative support via NDN Business Office
- custodians – Full-Nodes, Lite-Nodes
- users – anonymous or registered.

NDN Information Resources include data (digital content), tools and services. NDN data Domains extend to the following: survey and administrative data (NDN's initial focus), geospatial data, and observational/experimental science data.

Challenges ahead for NDN include the following:

- getting started
- market failure and “critical mass”
- understandable commitment to existing systems, protocols, etc
- management of information assets
- authorising environment?
- custodians, users and communities of interest
- data management
- technology, legal and administrative infrastructure
- NDN and the proposed Australian National Data Service (ANDS).

4.3.5 National Information Sharing Strategy (NISS)

[Emily Whitten](#), Australian Government Information Office (AGIMO)

The significant decision of the ministerial Online and Communications Council (OCC) on 29 June 2007 in relation to Item 10(a): Spatially Enabled Government – National Information Sharing Strategy (NISS) has strong relevance not only to the sharing of spatial data forming part of PSI but also to all other information domains included in PSI.

After considering the various current barriers to data sharing practices in the government context, the OCC formed the view that areas of government need the application of consistent information interoperability to enable government to provide effective services to citizens and business.

The Council identified a number of current barriers to information exchange and interoperability between and amongst the Federal, State and Territory governments. The barriers include:

- discoverability – the ability to locate information
- pricing and access policies including licensing arrangements
- information sharing – interoperability through collaboration
- standards including governance and uniform adoption
- digital rights management
- privacy issues
- custodianship, currency and quality of data
- costs of sharing
- cultural/organisational/jurisdictional considerations
- different data sets developed in different software packages.

The data sharing solutions developed under the NISS project will have strong relevance to all Australian inter-jurisdictional or cross-border data sharing projects or initiatives.

The NISS solutions supporting interoperability will have potential application to all categories of PSI, including national security, natural resources management, pandemic prevention such as avian flu, climate change, health and ageing, Crimtrac, tourism and transport.

The NISS solutions being sought to support information flows between the States and Territories and the Australian government will also apply to information flows between states and territories and local governments, as well as between government agencies within any jurisdiction.

The NISS initiative of the Ministerial OCC is a genuine advance strongly supporting consistent information interoperability between and amongst parties, which is one of the key general objectives of open access to PSI.

4.3.6 Data Policy

[Claire Driscoll](#), National Human Genome Research Institute (NHGRI), National Institutes of Health (NIH), USA

How does the NHGRI (National Human Genome Research Institute) ensure open access to genomics databases and unrestricted use of data?

The US National Institutes of Health (NIH) is the largest financial backer of biomedical research in the world, having an annual budget of upwards of \$US30 billion. The mission of NIH is to uncover new knowledge that will lead to improved public health by conducting and supporting research. In addition to being a leading research institution the NIH has also been a leader in the advancement of enlightened data release, data sharing and data access policies.

Scientists as well as non-scientists worldwide have benefited enormously from having cost-free, restriction-free access to critical biomedical information such as DNA and protein sequence data as well as on-line access to a large body of scientific

literature thanks to NIH's funding and stewardship of databases such as GenBank and PubMed, respectively. From its inception, NIH has been a very strong supporter of open access to publicly funded scientific research results in order to accelerate development of scientific knowledge and to maximise the public health benefits from the application of such knowledge. One of the iconic scientific research projects funded by the NIH was the Human Genome Project (HGP). The HGP is illustrative of the impact open access policies may have especially when mandated by funding agencies.

For large scale genomics community resource projects such as the HGP and the Genetic Association Information Network (GAIN), to name but two of the many such initiatives being carried out by NIH grantees and contractors, the NIH has implemented data sharing and access policies consistent with the following principle: the greatest public benefit will be realised if data is made available, under terms and conditions consistent with the informed consent provided by individual participants, in a timely manner to the largest possible number of researchers.

Benefits of the NIH's data policies include improved health through a better understanding of the health needs of the public, facilitating the development of improved diagnostic tools, and design of new, safe and highly effective treatments; and maximising public investment by accelerating the discovery of associations between genetic data and disease, while minimising research costs.

4.3.7 Data Pricing at Geosciences Australia

[Ben Searle](#), Office of Spatial Data Management

OSDM is charged with implementing and managing the Australian Government Policy on Spatial Data Access and Pricing. The presentation discussed the Publicly Available Data Schedule which consists of approximately 745 data sets which are available free over the internet (with cost of transfer for "packaged" products). There are no restrictions on use (but copyright may be reserved by the Commonwealth and a standard licence agreement applies), and customised products are charged at marginal cost.

Experience has shown that such free access and simple licensing greatly promotes the use of spatial data. However, it requires strong policy and governance structures in place, common licensing, active support and encouragement across all government agencies, and resources to implement and manage data access mechanisms.

The OSDM experience shows that major reform and benefits are able to be realised through the powerful combination of a strong open access policy being applied to an increasing number of key PSI databases, a standardised or common form of online licence authorising unrestricted use, and appropriate supporting technology. OSDM is a very good example in which the three elements of policy, law and technology have been coordinated to deliver highly efficient and effective outcomes with greatly enhanced service to the public through open access to PSI.

4.4 Open Access to PSI – The Content

4.4.1 Creativity and Open Access to PSI

[Dr Terry Cutler](#), Cutler and Co. (Board Member CSIRO)

This presentation argued that innovation is critical to the competitiveness and sustainability of our economy and society and that open access to PSI is important for innovation because knowledge and information flows underpin creativity and innovation.

It is especially important in a small economy like Australia because of the relative scope and scale of public sector information. The public sector is a major – even the dominant – producer and custodian of information. Furthermore, only government and the public sector have the critical mass to create inclusive public platforms and scalable repositories.

The wise administration of public sector information can create significant economic benefits through strengthening the national innovation system. By its own practice, governments can help shape the rules and conduct of wider information markets. As with most things, however, the devil is in the detail.

The utility of public information to users will be determined by the terms of access, including the efficacy of arrangements for such things as:

- information exclusions – open access should be the default setting
- search ability and discovery
- transparency of language and code
- transaction costs
- the preservation of information and its long-run accumulation.

Good outcomes require an approach to the principles of access which is taken from the perspective of prospective users, and to have a keen regard for the potential obstacles and bottlenecks to the effective use of public sector information.

4.4.2 The Data Universe

[Dr Chris Greer](#), Program Director, Cyberinfrastructure, National Science Foundation (NSF), USA

The conduct of science and engineering is changing and evolving where information is the currency of the digital age and information integration is the means for mobilising that currency for discovery, innovation, learning and progress. This is due, in large part, to the expansion of networked cyberinfrastructure. The opening of a fifth dimension through cyberinfrastructure is the defining feature of the digital age. In March 2007 the National Science Foundation released its [Cyberinfrastructure Vision for 21st Century Discovery](#), certainly an interesting read.

It is argued that the fifth dimension (cyberinfrastructure) provides more room for innovation, new spaces for learning and discovery, expanded opportunities for collaboration and interaction, and greater capabilities for research and education. Individuals, groups, organisations and nations that don't embrace the fifth dimension will fall behind in the digital age.

The 5D World is characterised by:

- Time and place are no longer barriers to participation and interaction

- Information is the primary driver for progress
- Access is open to specialists and non-specialists alike
- The realm of the possible is expanded through new capabilities, resources and mechanisms.

The presentation provides information on the international policies surrounding cyberinfrastructure. The National Science Foundation fully recognises that the challenge is to use or employ the attributes of the 5th Dimension to effectively and efficiently deliver the objectives of open access to PSI.

4.5 Open Access to PSI FUTURE

4.5.1 Report on E-Research Future Vision

[Professor Mary O’Kane](#), Chair, CRC for Spatial Information (CRC-SI)

This presentation discussed e-research, its role and the requirements for it to flourish. E-research is about the democratisation of research, with individuals and small groups being able to become drivers of e-research, e.g. World Meteorological Organisation and Bureau of Meteorology. Examples also include the Financial Markets CRC and the CRC for Spatial Information.

The limiting factors for e-research include legal permissions to use data, lack of data and access to data policies, current low bandwidth, not valuing data repositories, not valuing international organisations, an inability to pose the problems, lack of tools, lack of sophistication with data (partial and sensors), not supporting a culture of multi-country collaboration, not providing appropriate education, not getting the drivers and incentives right, and not anticipating the future.

By addressing and overcoming these limiting factors the almost limitless potential in prospect for future e-research will be able to be better realised. The coordination of the three key features of government policy (access and reuse), law (legal permissions through standardised licences (e.g. CC) conferring clear and broad rights of reuse) and technology (including broadband) will provide a solid basis upon which to explore the full potential of e-research in the future both within Australia and globally.

4.6 Record of Workshop Outcomes

There were four workshop groups with each group containing one or more of the international and Australian presenters. Each of the groups made various observations on factors relevant to realising the goal of implementing open access to public sector information and made recommendations for action.

A number of these are discussed below.

Observations

If governments choose to embrace open access to government information this outcome would be facilitated by reducing the risk of legal liability for government, and its public servants, to an acceptable and realistic level through the use of appropriate open content licences, including Creative Commons.

PSI is far more likely to flow or be made more accessible if the risk of legal liability to government, and its employees, is reduced to acceptable and realistic levels. This

concept has been expressed in shorthand form as “get rid of the risk and the data will flow”.

Public servants are by their nature often risk averse. However, if a risk averse policy or attitude is adopted in relation to PSI by custodian agencies and their officers, then little or no PSI will be accessible by any non-government entity or the general public, and any rights granted to use the PSI are likely to be limited and restrictive.

By using appropriate open content licences, such as Creative Commons, the risk of legal liability is in fact reduced to entirely acceptable and realistic levels and this would serve as a strong incentive for custodian agencies, and their officers, to provide greater access to their PSI to non-government entities and the general public. Also, the existence of a government policy or top down directive supporting open access to PSI would clearly assist and encourage public servants in implementing and promoting open access practices. There is a need to develop strategies to improve the management of data, so that data is treated and managed as an asset.

While individuals who generate or have custody of data are likely to regard it as an asset requiring proper management, it is frequently the case that higher level managers do not treat it in the same way. To improve the way data is perceived and dealt with, there would be value in producing targeted reports on data relating to specific subjects (e.g. water, environment, health, etc) to enable decision makers to better understand the importance of data and its uses.

There is a need to demonstrate the cost effectiveness of data collection and management to higher level decision makers. In this regard, the Productivity Commission could be requested to carry out a robust economic analysis of the outcomes of enabling greater access to PSI.

Top down support and guidance is essential to bring about cultural and operational changes necessary to promote access to PSI.

The form or nature of senior level support extended to consideration of the potential for a (future) Innovation Department at the federal level to build wide-ranging support for data access among forward-thinking leaders.

Recommended Actions

Develop a plan of action to be presented to the next meeting of the Online and Communications Ministerial Council (OCMC) in September 2008 supporting a comprehensive national strategy promoting open access to public sector information.

This is strategically important as there is great potential for promoting open access to public sector information (PSI) under the National Information Sharing System (NISS) recently announced by the OCMC.

In this respect, there is a need for an expert working group to be formed to work over the next 12 months on developing the action plan to be presented to the OCMC. Such a group would be made up of representatives of relevant CRCs, governments, universities, professional organisations and other relevant bodies.

The Australian Government Information Office (AGIMO) would appear to be appropriate to undertake the role of facilitating the development of links among the relevant bodies (government and non-government) that have been actively involved

in access to PSI both nationally and internationally (for example the OECD and the International Council for Science (formerly the International Council of Scientific Unions).

Continue progress of demonstration projects which enhance access to PSI by providing necessary encouragement and support.

Examples of projects already underway are Information Queensland, Office of Spatial Data Management (OSDM) and the West Australian Land Information system (SLIP). The use of high profile Australian multi-jurisdictional projects, which adopt open access principles and open content licensing, illustrate the benefits of open access practices in serving the public interest. Lessons from such demonstrators should inform policy, legal and technological developments in Australia.

Demonstrate to the public the real benefits of open access in practice by establishing and promoting a website or portal through which a limited number of selected databases are available for downloading using open access practices and Creative Commons and seeking feedback.

By establishing and encouraging the use of a pilot website by the public and private sectors to access certain public sector information government can provide a practical example of open access in action. Selected databases would be made available under this initiative and feedback could be sought from users to identify possible improvements. This initiative would also help de-mystify just what is meant by open access and allow users to comment on their actual experience of the system in operation. The search ability of data would be demonstrated and how the technology platform embeds the watermark of the metadata and the relevant Creative Commons licence.

The operational efficiencies and effectiveness which are able to be realised through employing open access principles and open content licensing to facilitate cross-border data sharing arrangements should be used to illustrate the benefits of open access to public sector information.

There are currently over 42 multi-jurisdictional COAG projects, many or all of which would benefit from implementing open access principles and open content licensing. Projects such as the National Water Initiative could be used to publicise the benefits of open access and promote a greater understanding and acceptance of the real utility of open access across the full data spectrum from water to geospatial (mapping) information to climate and beyond.

Prepare proper documentation of the open access framework (policy, technology and legal facets).

To facilitate consistent understanding and implementation of open access to public sector information across all levels of government it is important that a knowledge dissemination or education program be undertaken to government and non-government sectors alike. There is a real need for compatible or identical standards, specifications and practices to be adopted nationwide (and internationally) if the potential of open access is to be realised. Proper documentation will be essential as part of the education, implementation and ongoing maintenance of the open access framework.

Prepare metadata tools to enable custodian agencies and the general public to easily create and apply metadata to their information or data products.

By providing easy to use standardised tools for the creation of metadata for information and data products government would promote the uptake of open access practices. The search ability of data and information is dependent upon metadata being attached to or embedded into the information or data product as it is the metadata which the search engines interrogate in the first instance.

5 The Stanley Declaration

A broad consensus emerged in favour of the benefits to be derived from government implementing an open access policy, subject to proper protection of private and other restricted information, and the use of Creative Commons (CC) open content licences for the majority of PSI which is unaffected by privacy or other restricting factors. Conceptually, open access to PSI leads to the realisation of the information's full social, cultural, environmental, civil society, and commercial potential.

The group believed that a declaration was required to reflect their collective view. Given that the Summit was convened in Brisbane within the boundaries of the former County of Stanley, the group formulated the following declaration.

The Stanley Declaration

The adoption and implementation by governments of an open access policy to public sector information (PSI) will ensure the greatest public benefit is derived from the increased use of information created, collected, maintained, used, shared, and disseminated by and for all governments in Australia.

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