



Current Status of Surveying, Charting and Mapping at the National Level

Commonwealth of Australia

**Presented at the 8th United Nations Regional Cartographic
Conference for the Americas**

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<http://www.ga.gov.au/nmd/asdi/forums.htm>**

Contents

Introduction	2
Glossary	3
Government coordination	3
National	3
ANZLIC the Spatial Information Council	3
ICSM	4
Government-specific	4
Federal government	4
OSDM	4
State and Territory government	5
BOSSI	5
VSC	6
WALIS	6
Government agencies	7
Federal government	7
GA	7
State and Territory government	8
PSMA	8
Business	8
ASIBA	8
Education and research	9
ASIERA	9
CRC-SI	9
Professional associations	9
SSI	9

Introduction

This report contains information about the spatial information industry in Australia. Spatial information encompasses mapping, charting, surveying and the broad range of location-based endeavours now very much a feature of contemporary Australian economic, social and environmental life.

The report has been prepared to inform participants at the 8th United Nations Regional Cartographic Conference for the Americas, held in New York USA, 27 June to 1 July 2005.

The report is structured as follows:

- Activities of government coordination bodies;
- Activities of government agencies;
- Activities of business;

- Activities of education and research institutions; and
- Activities of professional associations.

Where possible internet references have been included in the report to allow the interested reader to seek out more detail on particular items.

There are many spatial information acronyms in use in Australia. Those that are used in this report are included in the glossary of terms.

The report has been compiled by Geoscience Australia from contributions by a number of organisations. The views expressed are those of the individual organisations. The report may be accessed at <http://www.ga.gov.au/nmd/asdi/forums.htm>.

Glossary

ANZLIC	Australia New Zealand Land Information Council – also known as the Spatial Information Council
ASDI	Australian Spatial Data Infrastructure
ASIBA	Australian Spatial Information Business Association
ASIERA	Australian Spatial Information Education and Research Association
BOSSI	The Board of Surveying and Spatial Information of New South Wales
CRC-SI	Cooperative Research Centre for Spatial Information
GA	Geoscience Australia
ICSM	Intergovernmental Committee on Surveying and Mapping
OSDM	Office of Spatial Data Management.
PSMA	PSMA Australia Limited (Public Sector Mapping Agencies)
SSI	Spatial Sciences Institute
VSC	Victorian Spatial Council
WALIS	Western Australian Land Information System

Government coordination

National

ANZLIC the Spatial Information Council

Web address <http://www.anzlic.org.au/>

ANZLIC, the peak inter-governmental council for spatial information in Australia & New Zealand, is developing nationally-agreed policies and strategies aimed at achieving "best practice" in spatial data management. Within Australia, the major program for improving access to data is the ASDI.

ANZLIC advocates the use of common open interoperability standards, ensuring that data is more easily available to decision makers and increasing the range of spatial information products and services available to government, business and the community. Within government, ANZLIC is creating a strong linkage between policy decisions and the information needed to implement them.

ANZLIC Council comprises ten members representing the Australian Government, the New Zealand Government and each of the State and Territory governments of Australia. A key concept of the Council is that each member represents a formal spatial information coordinating structure for whole-of-government within their jurisdiction. ANZLIC works through the Council itself, the jurisdictional Coordination bodies, the Contact Officer network, several Standing Committees and Working Groups, as well as its national office.

ICSM

Web address <http://www.icsm.gov.au/>

ICSM is made up of representatives from all the Australian States, Territories, the Commonwealth and New Zealand. The Committee is a Standing Committee of ANZLIC and its members are responsible for government surveying and mapping functions in their jurisdiction.

ICSM's role is to provide leadership, coordination and standards for surveying, mapping and charting, and assembling and maintaining national framework data sets. Framework data includes geodetic, topographic, cadastral, street addressing, tides and sea level, and geographical names.

Recent achievements include:

- The establishment of a 'National Topographic Information Coordination Initiative' to improve cooperation between the jurisdictions in areas of topographic data collection, management and access. Collaborative activities to date have centred on shared image procurement and joint mapping projects;
- The development of a nationally consistent system for electronic lodgement and transfer of cadastral record information – with the aim of removing the need for paper copies of survey plans;
- Participation with ANZLIC and allied bodies in initiatives that will lead to improved discovery and accessibility of information about rights, restrictions and obligations relating to land administration in Australia;
- Hosting a United Nations Toponymy workshop for 2 weeks in October 2004 for students from seven countries on the art of place names; and
- Production of a Compendium of terms used in a legal context when describing the tidal interface which has been published on the ICSM web site. While the Compendium is far from definitive it does highlight the range of terms used by the States and Territories in Australia and allows users to map terms from one region to another.

Government-specific

Federal government

OSDM

Web address <http://www.osdm.gov.au/>

The mission of OSDM is to expedite the delivery of spatial data, information and knowledge for the economic, social and environmental benefit of Australia. Its role is to administer the Australian Government's Policy on Spatial Data Access and Pricing, which is designed to :

- Maximise the Australian Government's benefits from the application of spatial data;
- Facilitate community access to public sector spatial data; and
- Support the growth of a private sector spatial information industry.

The strategies OSDM follows are:

- Encourage Government agencies to make their spatial data available under the terms of the Policy;
- Ensure all scheduled datasets have an identified custodian;
- Assist custodians to maintain and provide access to datasets in a manner that delivers optimal benefit to users;
- Expedite a whole-of-government approach to meeting Australian Government agencies' needs for spatial data and tools;
- Support a whole-of-Australian-Government input to national spatial data coordination mechanisms;
- Promote development of the spatial information industry; and
- Provide Secretariat support for the interdepartmental committees that coordinate cross-portfolio implementation of the Policy, namely, the Spatial Data Policy Executive, and the Spatial Data Management Group.

State and Territory government

BOSSI

Web address <http://www.bossi.nsw.gov.au/>

BOSSI is constituted under the Surveying Act, 2002, to provide for the registration of land and mining surveyors (over 1000 in NSW), to regulate the making of surveys and to advise the Minister of Lands on spatial information, and has been in operation in one form or another since 1837.

BOSSI is charged with the development and promotion of spatial information initiatives within New South Wales.

"Spatial Information" is defined as *"any information that has a definable location in space and time which can be above, below or on the earth's surface."*

It includes, but is not limited to, information about natural resources and environment, climate, land ownership and rights, landuse, infrastructure and demography".

BOSSI is enabled under the Surveying Act 2002 to provide the following in relation to spatial information activities within NSW.

- The investigation of matters referred to it by the Minister for advice or report in relation to surveying or any other aspect of the spatial information industry; and;
- The investigation of, and the provision of advice to the Minister with respect to, the practice to be followed in the conduct of surveys or in the collection, collation and dissemination of any other kinds of spatial information.

In order to address these two functions, BOSSI engaged Corporate GIS Consultants to develop a Road Map and Framework for a NSW Spatial Information Strategy.

The [Road Map and Framework report](#) from Corporate GIS clearly indicates that NSW needs a strategy which provides a whole of industry approach to spatial information industry development across the public, private and academic sections.

BOSSI has adopted the report as stage 1 and is now embarking on the next stage of the development of a draft Spatial Information Strategy which will form the basis for wide scale stakeholder consultation.

The Road Map and Framework report is an important milestone in the maturity of the NSW Spatial Data Infrastructure.

VSC

Web address <http://www.land.vic.gov.au/vsc>

New arrangements are in place for coordinating spatial information in Victoria. The VSC represents the whole Victorian spatial industry through representation on the Council by members of the peak spatial industry bodies. Through representation provided by each State Government department, Victoria Police, and VicRoads, the Victorian Government Spatial Committee provides coordination for the State Government sector.

These bodies represent a coordinated and collaborative direction that is intended to reap widespread benefits for the industry. The primary task for these two bodies is the implementation of the Victorian Spatial Information Strategy 2004-2007. The key features to achieve this are a joint approach to the development of policies and procedures, the creation and implementation of workplans and priority projects, and the development of strong partnerships between Government, industry and the academic sectors.

The VSC has the specific role to drive and support the Victorian spatial industry through the initiation and development of spatial information policy, maintaining a focus on the development and use of spatial information, and the establishment of a mechanism for communication and cooperation across all spatial industry sectors. The Council has representation from local, Victorian and Australian Government, industry, academia, and the professional associations.

The Victorian Government Spatial Committee has the role of setting the strategic direction for spatial information policy and decision-making within Victorian Government agencies. This includes promoting a coordinated and consistent approach to the planning and allocation of resources for the development, management and use of spatial information, the development of a whole of Victorian government registry of spatial information, and the promotion of spatial information best practice. All Victorian Government departments are represented on this committee.

The coordinating arrangements provide strong links with other spatial industry peak bodies. Members on the VSC and VGSC provide direct connections at a National level to ANZLIC, ASIBA, ASIERA, SSI, Geoscience Australia, and PSMA Australia Limited.

Direct connections are held at a State level to the Municipal Association of Victoria, to the Office of the Chief Information Officer, and to the Government's ICT Policy Committee.

These linkages represent communication with the Australian Government, other state government departments, industry bodies, the professional association, academia, and high levels of the Victorian State Government.

The success of these two bodies will result in the building of partnerships within and beyond the Victorian spatial industry, a coordinated approach to spatial information policy development, the development and application of initiatives that highlight the value and importance of spatial information, and the creation of strategies for financing, maintaining and developing spatial information and resources.

WALIS

Web address <http://www.walis.wa.gov.au>

WALIS is responsible for facilitating across-government access and delivery of the geographic information held by WA Government agencies. It is a partnership of most State Government agencies and local government, working with business, industry and the general community to manage and promote geographic information.

The WALIS Office is the central hub, around which most activities are organised and from which most strategies, standards and policies for data management and access are developed. The Office also provides the core services of WALIS Atlas, Clearinghouse (a secure

environment for WALIS member agencies to share data) and Interragator, a metadata directory service.

At present, key projects with which WALIS is involved include:

- ANZLIC Metadata Profile. The WALIS Office is currently project managing, on behalf of ANZLIC, the development of a new metadata profile for Australia and New Zealand to comply with the ISO 19115 Standard. The project is being jointly funded by a range of agencies, including from New Zealand. The outcome will be a new metadata tool that will be freely available to anyone wishing to use it. The profile will become mandatory for metadata stored on systems such as Interragator;
- State Land Information Capture Program (SLICP). The SLICP identifies and collates the capture programs for digital geographic data, aerial photography, satellite imagery and map production within Western Australian State Government agencies. A review of this program is currently being completed in order to make the process more efficient and allow greater capture. Opportunities for improving the submission process (from paper-based to on-line) are also being developed;
- Custodianship and Pricing and Access policies. WALIS has policies for both data custodianship and data pricing and access, both of which are dated and are currently being reviewed. The custodianship policy refers to fundamental datasets that are maintained by WALIS member agencies on behalf of the WA Government, and sets out the responsibilities of custodial agencies and those using the data. The pricing and access policy covers the difference between data used by WALIS member agencies for government business and data sold to users for commercial purposes; and
- WALIS "outreach" program. WALIS Office organises a range of events and activities during the year and also produces two editions of WALIS News and 12 editions of WALIS e-News each year. WALIS Forum, the premier spatial information event in Australia, is held every 18 months (the most recent event was held in February this year). Seminars and workshops are held regularly.

Government agencies

Federal government

GA

Web address <http://www.ga.gov.au/>

Geoscience Australia is Australia's national agency for geoscience research and geospatial information. It is located within the Industry, Tourism and Resources portfolio.

Project activities include:

- Monitoring earthquakes and nuclear explosions, making earthquake and landslide risk-assessments, studying risks faced by communities, and providing technical test-ban-treaty advice to a range of clients in government and the community;
- Providing information on the Earth's magnetic field for navigation, mineral exploration, geological dating, dealing with hazards related to geomagnetic disturbances, and many other applications;
- Mapping the outer limits of Australia's jurisdiction under the UN Convention on the Law of the Sea, studying the environmental impacts of hydrocarbons, researching estuarine health and participating in the international Ocean Drilling Program;
- Identifying new prospective basins in Australia's offshore territory and promoting them as areas appropriate for exploration investment;

- Producing national geoscientific maps, databases and information systems, conducting regional and mineral-systems studies, advising on Australia's mineral resources for land-use planning and management, and promoting opportunities for minerals exploration; and
- Providing fundamental spatial information which relates to national mapping, maritime boundaries, remote sensing and geodesy.

State and Territory government

Web addresses are:

- Australian Capital Territory Planning and Land Authority
<http://www.actpla.act.gov.au>;
- New South Wales Department of Lands <http://www.lands.nsw.gov.au>;
- Northern Territory Department of Infrastructure, Planning and Environment
<http://www.ipe.nt.gov.au>;
- Queensland Department of Natural Resources and Mines <http://www.nrm.qld.gov.au>;
- South Australia Department of Administrative and Information Services
<http://www.landservices.sa.gov.au> and Department of Environment and Heritage
<http://www.environment.sa.gov.au>;
- Tasmania Department of Primary Industries, Water and Environment
<http://www.dpiwe.tas.gov.au>;
- Victoria Department of Sustainability and Environment <http://www.dse.vic.gov.au>;
and
- Western Australia Department of Land Information <http://www.dli.wa.gov.au>.

PSMA

Web address <http://www.pdma.com.au>

PSMA is an unlisted public company limited by shares and owned by the state, territory and Commonwealth governments of Australia.

As a government-owned company, we function as a 'Clearing House' within the ANZLIC model for the ASDI.

PSMA does not aim to compete with the private sector: in fact the contrary is true. PSMA Australia has evolved to facilitate access to seamless national datasets derived from government data sources. It removes barriers and simplifies licensing of national datasets to Value Added Resellers, enabling and stimulating the spatial industry.

Business

ASIBA

Web address <http://www.asiba.com.au/>

ASIBA exists to create a business environment rich with opportunities for our members to create value for themselves and others through fostering a valued, robust and internationally competitive Australian Spatial Information Industry by:

- Representing and promoting the interests of its members in political and industry arenas;
- Promoting the scope, applications and value of the spatial sciences to other industries, government and the community;

- Providing an avenue for cooperation between members and connectivity of the diverse disciplines which, together, constitute the Spatial Information Industry;
- Taking an active part in public forums and contribution to public policy formulation;
- Providing members with up-to-date market and policy intelligence;
- Providing a forum for members to exchange views and resolve differences;
- Being responsive to members' needs and concerns in relation to the state of the Spatial Information Industry or their part in it; and
- Promoting modern and effective business management practices to its members.

The ASIBA vision is a united mainstream Spatial Information Industry leading the way in the Information Age.

Education and research

ASIERA

Web address <http://www.asiera.org.au/>

ASIERA provides a forum for all academics, teachers and researchers in the field of spatial information. ASIERA represents both the education and research sectors within the discipline of spatial information.

The mission of ASIERA as defined by its constitution is:

- To support all academics and researchers of spatial information studies, and other allied subject areas in Australasian tertiary and post-secondary institutions;
- To promote the academic and research interests, and welfare of the Australasian spatial information industry; and
- To provide a forum for discussion of academic and research matters, and to encourage close cooperation between the staff of the various institutions.

CRC-SI

Web address <http://www.crcsi.com.au/>

The CRC-SI brings together \$78 million in cash and in-kind from its partners to identify the question of our future spatial information needs— who needs SI, in what form, and when—and to seek innovative solutions to meet these needs. The CRC-SI will challenge the existing assumptions and practices of information management. It will use the collective wisdom of our broad base of participants to accelerate the growth of industry, generate intellectual property (IP), seek efficiency gains for government, and better position the research and education programs of universities and other institutions.

The CRC-SI is an unincorporated joint venture formed in July 2003 through the partnership of over 50 organisations from the corporate, government and university sectors from around Australia. We have over 40 companies as 'shareholders,' an unprecedented number in the history of Australia's CRCs.

Professional associations

SSI

Web address <http://www.spatialsciences.org.au/>

The Spatial Sciences Institute is a national body catering for the professional people who make up the spatial information industry. It gives a voice to the members of the spatial science community in both the national and international arena.

The vision of the SSI is to provide a globally recognised forum for the spatial sciences community that leads, promotes, advocates and delivers excellence.

The Spatial Sciences Institute is a national body taking advantage of economies of scale, standardised administrative procedures across the nation, and centralised functions, where that is of advantage to members, but with service delivery maintained at the regional level to ensure the needs of members are understood and met.

There are no barriers to membership of the Institute. Specifically, members are not required to hold an academic qualification. However, training, qualification and experience will be recognised and rewarded through professional certification. Professional standards of conduct and practice are maintained through subscription to a Code of Ethics.

Modern communication technology is utilised to minimise the costs of administering the Institute, to allow members in all regions the opportunity of taking an active part in the administration of the Institute, and to enable national functions to be decentralised.

It is a new body that accommodates the changing nature of the industry while honouring and building upon the traditions, values and history of its founding institutions.