

INTERGOVERNMENTAL COMMITTEE ON SURVEYING AND MAPPING BIENNIAL REPORT

July 1998 to June 2000



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FOREWORD

This report includes information about ICSM and covers ICSM's main activities for the period 1 July 1998 to 30 June 2000.

The Intergovernmental Committee on Surveying and Mapping (ICSM) comprises the heads of Australia's Commonwealth, State, Territory and Defence surveying, mapping and charting agencies. New Zealand is also a member of ICSM. ICSM provides a mechanism to establish standard protocols across jurisdictions and to avoid unnecessary duplication. It is also a forum to promote development of the latest technology and for the exchange of information and ideas in the national interest and between the two countries.

A significant achievement of ICSM has been the planning, promotion and implementation of a new horizontal datum for Australia, the Geocentric Datum of Australia (GDA). While the implementation commenced in the year 2000, the planning commenced more than a decade ago. Thanks to all who have contributed to the successful implementation of GDA.

The recent efforts of ICSM have been focussed upon the implementation of the ANZLIC initiative of developing an Australian Spatial Data Infrastructure (ASDI). The ASDI is providing an environment for informed decision-making, where users can readily access spatial information from authoritative sources, and integrate this information with other data to provide value added products and services.

ICSM has provided national leadership in the area of standards development to support the ASDI.

I would like to place on record my thanks to all who have contributed to the success of ICSM initiatives over the last two years. The members of various Working Groups and Technical Sub-Committees have produced a large number of quality reports and recommendations. ICSM members have vigorously debated issues of significance, and the ICSM Executive Officer has coordinated the activities of all the groups to ensure an excellent outcome.

Thank you to all who have so willingly given of their time and effort to produce the nationally significant outcomes that are detailed in this report.

While ICSM will continue to support ANZLIC's ASDI initiative, ICSM has identified a number of challenging issues to address in the future. These include:

- Building improved relationships with key stakeholders;
- Addressing issues surrounding the land and water interface; and
- Cadastral reform.

The successful development of these and the other issues identified in this report will ensure that ICSM continues to play a meaningful and relevant role in the Australian and New Zealand surveying and mapping Industry.

I wish to thank the previous chairman, Mr Rod Menzies for his support to me over the past two years, and offer the incoming chairman, Mr Peter Ramm, my support as he leads ICSM through the next two challenging years.



Graeme Rush
ICSM Chairman
1998–2000

1. BACKGROUND

The Intergovernmental Committee on Surveying and Mapping (ICSM) is the key coordinating body in Australia and New Zealand for surveying and mapping issues. ICSM provides a mechanism to establish standard protocols across jurisdictions and to avoid duplication of effort. It is also a forum to provide a consistent and modern approach to surveying, mapping and charting for national development and defence in Australia and New Zealand.

ICSM was established by the Australian Prime Minister, State Premiers, and the Chief Minister of the Northern Territory in 1988. Since then, Australian Capital Territory and New Zealand have joined. A prior body, the National Mapping Council (NMC), coordinated Australian mapping programs from 1945 to 1988.

ICSM is made up of Australia's Commonwealth, State, Territory and Defence surveying, mapping and hydrographic charting agencies. New Zealand joined ICSM as a full member in 1997 and its members represent both New Zealand civil and Defence mapping. The Committee meets twice a year. A Chairman is appointed from the Committee every two years. The Secretary of ICSM delivers secretariat and project support to the Committee and the ICSM working groups. The Secretariat was provided by AUSLIG during the reporting period.

Within ICSM, the following groups carry out projects and research for, and provide advice to ICSM, in their fields of expertise.

- ▶ Geodesy Technical Sub-committee;
- ▶ Geocentric Datum Promotions Working Group;
- ▶ Cadastral Data Technical Subcommittee ;
- ▶ Street Addressing Working Group;
- ▶ Topographic Data Working Group;
- ▶ Committee for Geographical Names in Australasia (CGNA); and
- ▶ Permanent Committee for Tides and Mean Sea Level (PCTMSL).

Membership of these working groups are from key government, academic and private organisations within Australia and New Zealand.

ICSM provides an important forum for the exchange of information and ideas in the national interest and for trans-Tasman matters.

Additional information can be found on the ICSM world wide web site (www.anzlic.org.au/icsm/).

2. ROLE OF ICSM

The role of ICSM is to provide leadership through coordination and cooperation in and to:

- ▶ Address national and international surveying, mapping and charting issues;
- ▶ Support the development and implementation of national and international standards for surveying, mapping and charting;
- ▶ Provide a national and trans-Tasman forum for identifying and developing surveying, mapping and charting policy and technology issues, and for the exchange of information on surveying, mapping and charting, and;
- ▶ Encourage and sponsor research into surveying, mapping and charting.

ICSM's core function is to coordinate and promote the development and maintenance of key national spatial data. ICSM carries out its role by meeting its objectives in the areas of:

- ▶ Geodesy;
- ▶ Topographic data;
- ▶ Hydrographic data;
- ▶ Cadastral Data;
- ▶ Street Addressing;
- ▶ Tides and sea level;
- ▶ Geographical Names;
- ▶ Trans-Tasman cooperation; and
- ▶ International links and liaison.

In addition to these activities over the past two years, ICSM has undertaken an extensive promotional campaign for the adoption of the new Geocentric Datum of Australia and New Zealand Geodetic Datum 2000. The promotional campaign has been coordinated through the ICSM Geocentric Datum Promotion Working Group and has targeted all sectors of the spatial data industry in Australia, New Zealand and internationally. This campaign is still running and is likely to continue until early in the year 2001.

ICSM's current Strategic Plan can be viewed at www.anzlic.org.au/icsm/about/strategic.htm, and comments on the plan are welcome at any time.

3 . C O M M U N I C A T I O N

ICSM is committed to providing information on its activities as well as seeking input from industry and interested groups. ICSM has adopted five main channels of communication:

1. Publishing material on the ICSM World Wide Web site, located at: www.anzlic.org.au/icsm/
2. Presenting papers and conducting workshops at industry seminars and conferences;
3. Producing issue specific publications for circulation to interested groups;
4. Publishing papers in industry journals; and
5. Developing close liaison and cooperation with other industry groups and users.

4 . A S D I — A U S T R A L I A N S P A T I A L D A T A I N F R A S T R U C T U R E

ANZLIC is promoting the development and implementation of an Australian Spatial Data Infrastructure (ASDI). New Zealand has also moved in this direction.

ICSM has worked closely with ANZLIC in supporting the development and implementation of the ASDI. The working groups are developing the necessary data models, data dictionaries, associated guidelines and promotional strategies for cadastral, topographic, place name and street address data types.

ANZLIC has developed a model for the ASDI that comprises four core components:

1. Institutional framework comprising policy and administrative arrangements;
2. Technical standards defining the technical characteristics of the spatial (or geographic) datasets;
3. Fundamental datasets, the essential component of the ASDI, produced within the institutional framework and complying with the technical standards; and,
4. Distribution networks through which spatial datasets are made accessible to the community, in accordance with the agreed policy and standards.

Over the reporting period ICSM's core focus for the ASDI has been in:

- Geodesy;
- Spatial representation of topographic datasets;
- Spatial cadastre;
- Geographical names; and
- Street addressing.

5. WORKING GROUPS

5.1 Geodesy

Geodesy provides the positional framework for all surveying, mapping and geographic information applications in Australia. The ICSM Geodesy Technical Sub-Committee is made up of technical specialists from jurisdictions within Australia and New Zealand and is responsible for providing advice on geodetic issues. The main role of this sub-committee is to maintain a compatible geodetic infrastructure across Australia, New Zealand and internationally and assist ICSM meet its objectives.

Geodesy Technical Sub-Committee achievements during 1998–2000 include:

- ▶ Development of national, State and Territory transformation parameters to the Geocentric Datum of Australia (GDA) from the Australian Geodetic Datum (AGD);
- ▶ Development of grid transformations for Tasmania, Western Australia, Victoria, Queensland, NSW/ACT and Northern Territory;
- ▶ Development of GDA implementation strategies for the Commonwealth and all States and Territories within Australia;
- ▶ Implementation of the Geodetic Datum of New Zealand (GDNZ2000) in New Zealand;
- ▶ Development of the ICSM *GDA Technical Manual* (www.anzlic.org.au/icsm/gdatm/); and
- ▶ Accurate GPS survey of original Australia Height Datum (AHD) tide gauge bench marks, as part of the evaluation of the AHD and to link the AHD to a global vertical datum.

5.2 Geocentric Datum Promotion

The Geocentric Datum of Australia (GDA) is a new coordinate system for Australia which is compatible with the Global Positioning System (GPS). GDA superseded the existing Australia Geodetic Datum (AGD) coordinate systems (both AGD66 and AGD84).

The Geocentric Datum Promotions Working Group is made up of representatives from each Commonwealth, State and Territory agency in Australia and New Zealand.

The primary aim of the Working Group has been to provide sufficient information to users of survey, mapping and spatial data to help them make informed decisions on when and how to move from AGD to GDA.

The GDA material includes:

- ▶ Webpage, www.anzlic.org.au/icsm/gda/ as the primary reference site for GDA related material;
- ▶ Brochures: *Know Where You Stand With GDA* and *Get In Step With The Geocentric Datum: Discussing the Business Issues* (which was also badged for use in New Zealand);
- ▶ CD-ROM: containing factsheets, brochures, video, technical manual and other support material, software and transformation files for both New Zealand and Australia;

- ▶ Video: *Going Geocentric* (also badged for New Zealand use);
- ▶ Three information (or fact) sheets to support special interest topics, *Maps and the GDA, Transformation Options and GDA Grid Transformation Using Distortion Modelling*.

5.3 Topographic Data

Topographic data is not only critical for the production of base maps it provides a digital base for a wide range of electronic products. Topographic data is a fundamental dataset (or Theme) in the framework of the ASDI. ICSM has accepted sponsorship of the “*Spatial Representation of Topographic Features*” Theme of the ASDI. In line with the sponsorship role, ICSM completely reviewed its operations relating to topographic data. As part of the review the activities of the previous Topographic Data, Data Dictionary and Unique Identifiers Groups were combined into the one Topographic Working Group and were charged with the task of developing a comprehensive Data Model and Dictionary.

The Working Group has developed the preliminary version of the Data Model and Data Dictionary. The group is also investigating the issues surrounding incremental update, feature level metadata, and development of a topographic data manual.

More information can be found at www.anzlic.org.au/icsm/topo/

5.4 Cadastral Data

The cadastre is a fundamental layer of development of any land information system and is critical to the administration of land ownership, management and development.

The Cadastral Working Group has largely completed a national cadastral data model and cadastral data dictionary as part of ICSM’s commitment to the ASDI. It has also defined a minimum metadata specification for a national cadastral dataset, and has started investigation into encoding mechanisms for the transfer of data. As with the other working groups, incremental update and development of an integrated manual is currently being considered.

More information can be found at www.anzlic.org.au/icsm/cadastral/

5.5 Place Names

Place names are a critical element in the day to day operation of individuals and corporations and are used as one of the primary forms of referencing in many activities. The Committee for Geographical Names in Australasia (CGNA) is a permanent committee within ICSM and is responsible for providing advice on place naming issues.

CGNA achievements from 1998–2000 include:

- ▶ Revision of the *Toponymic Guidelines for Australia* originally published in 1995. These guidelines set out names, designators and policies for recording names in Australia;
- ▶ Revision of the *Gazetteer of Australian Geographical Place Names*;

- ▶ Production of *Guidelines for the Recording and Use of Aboriginal and Torres Strait Islander Place Names*;
- ▶ Development of a place names data model consistent with the aims of the ASDI initiatives; and
- ▶ Encouraging the adoption of recognised naming practices both in Australia and New Zealand.

More information can be found at www.anzlic.org.au/icsm/cgna/

5.6 Street Addressing

Street addresses are the most widely used method of referencing individual properties and businesses in Australia and New Zealand. The Street Address Working Group was formed in 1998 to help develop nationally consistent addressing practices and standards across Australia and New Zealand.

The Working Group has reviewed all the existing addressing standards in Australia and reviewed addressing standards internationally. The group has developed a revised standard which incorporates:

- ▶ Consistent treatment of both urban and rural addressing practices;
- ▶ Geocoding of addresses; and
- ▶ Complex addressing (for example shopping centres, industrial estates, and retirement villages).

The group has also developed an extensive strategy to promote the adoption of consistent addressing practices across Australia and New Zealand.

More information can be found at www.anzlic.org.au/icsm/street/

5.7 Tides and Sea Level

Tides and sea level information is used on a daily basis by a wide range of people. It is critical in the daily management of ports, prediction of currents, weather conditions and planning oil spill responses. Sea level monitoring has also become an important tool in the monitoring and research into long term climate change.

The Permanent Committee on Tides and Mean Sea Level (PCTMSL) is a technical subcommittee of ICSM. The role of the PCTMSL is to:

- ▶ Coordinate a national database of tidal records;
- ▶ Develop national standards and best practice guidelines for tidal related matters;
- ▶ Act as a focal point for national enquiries relating to tides and mean sea level; and
- ▶ Identify the long term tide and sea level management requirements for Australia and New Zealand.

The PCTMSL is made up of national, State and port authorities and scientific groups involved in the determination of tides and sea levels in Australia.

More information can be found at www.anzlic.org.au/icsm/tides/

6. FUTURE DIRECTION

During the next five years, ICSM will undertake the following leadership roles in the areas of land and seabed measurement and representation:

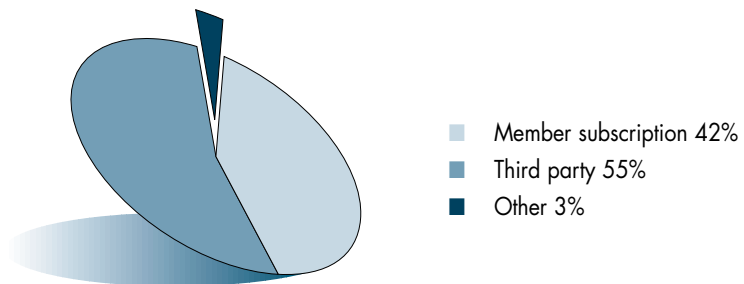
- ▶ Continue to provide a sponsorship role within the context of the Australian Spatial Data Infrastructure (ASDI) and the New Zealand initiative for a framework for government held data with respect to geodesy, cadastral surveying, topography, hydrography, place names and street addresses;
- ▶ Development of strategic direction for the provision and integration of spatial data of national significance;
- ▶ Development and publication of best practice guidelines, national technical policies, standards, specifications and data models particularly for geodesy, cadastral surveying, topography, hydrography, place names and street addresses;
- ▶ Sharing of knowledge and experiences;
- ▶ Communication and relationship development with key stakeholders in government, industry and the user community;
- ▶ Co-operation in and coordination of inter-jurisdictional projects;
- ▶ Encouragement of consistency for jurisdictional policies, standards, programs and priorities;
- ▶ Promotion of data integration;
- ▶ Provision of technical advice and support to other coordinating bodies;
- ▶ Encouragement and sponsoring of research;
- ▶ Facilitation of the involvement of industry in ICSM activities;
- ▶ Maintenance of international liaison; and
- ▶ Leadership in the broader role of cadastral surveying and mapping.

More information can be found at www.anzlic.org.au/icsm/about/

7. FINANCIAL REPORT

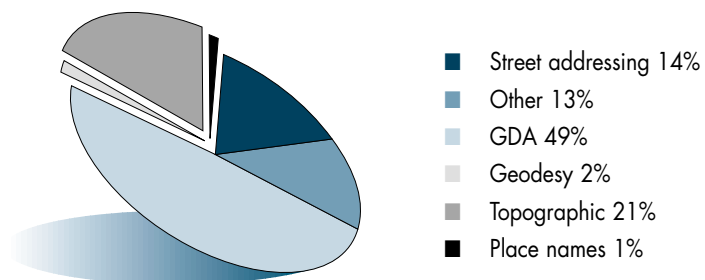
Revenue **\$373 000**

Revenue for ICSM activities has been generated primarily from member agencies through subscriptions and "third party" contributions from government and industry.



Expenditure **\$217 000**

Expenditure has occurred over five ICSM program components.



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