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Workshop Discussion Paper

Review of spatial information access and distribution in Victoria

Friday 20th February 2004
Nauru House Level 29 Boardroom, 80 Collins Street Melbourne
10.00 am to 2.30 pm

1 Introduction

This brief Discussion Paper includes:
- the purpose of the Review;
- a schematic overview of the current spatial information access and distribution framework in Victoria together with arrangements in place with Data Service Providers (DSPs) and Value Added Resellers operating within the framework;
- an outline of Victorian Government policy on cost recovery and pricing;
- a summary of key issues raised by a number of stakeholders;
- a snapshot of selected national and international models to provide context to the Victorian situation; and
- looks at the challenges ahead in implementing a sustainable access and distribution model that supports the achievement of the State's social, economic and environmental objectives.

2 Purpose of the Review

Land Victoria has commissioned a review of spatial information access and distribution in Victoria. The review arises from a recommendation of the Review of Survey and Spatial Information:

Recommendation

R4.13: *It is recommended that, in view of the range of access, pricing and licensing issues covered in other recommendations and in view of technological advances in data delivery capabilities, that the existing Data Services Provider and Value Added Reseller arrangements be reviewed.*

The primary concern of the review is the administrative and contractual arrangements under which DSPs and VARs operate, as these are considered to be the primary cause of issues, rather than the performance of specific DSPs or VARs.

The primary objectives of this review are to:
- examine both existing and proposed access and distribution arrangements;
- establish the most efficient and effective access and distribution model; and
- recommend this model to Government, including implementation timelines and processes.

3 Overview of Current Access & Distribution in Victoria

Figure 1 shows the components of current access and distribution framework in Victoria. The current environment provides for public enquiry (transaction based) and commercial access (bulk transfer) services provided through Data Service Providers (DSPs) and Value Added Resellers (VARs). Public access services comprise fee for service and free internet access to Government services and information via the Land Channel and local government web sites. DSPs and VARs distribute VICMAP Digital data sets for the whole or part of the State in specific formats for government and commercial applications. Customers with national interests can obtain data from VARs through the Public Sector Mapping Agency (PSMA).

Victorians also have access to Commonwealth Government data sets such as small-scale national topographic data through Geoscience Australia (amongst other data sets). The Commonwealth has generally adopted a 'cost of supply' policy under ANZLIC principles for ensuring that cost is not a barrier to access.

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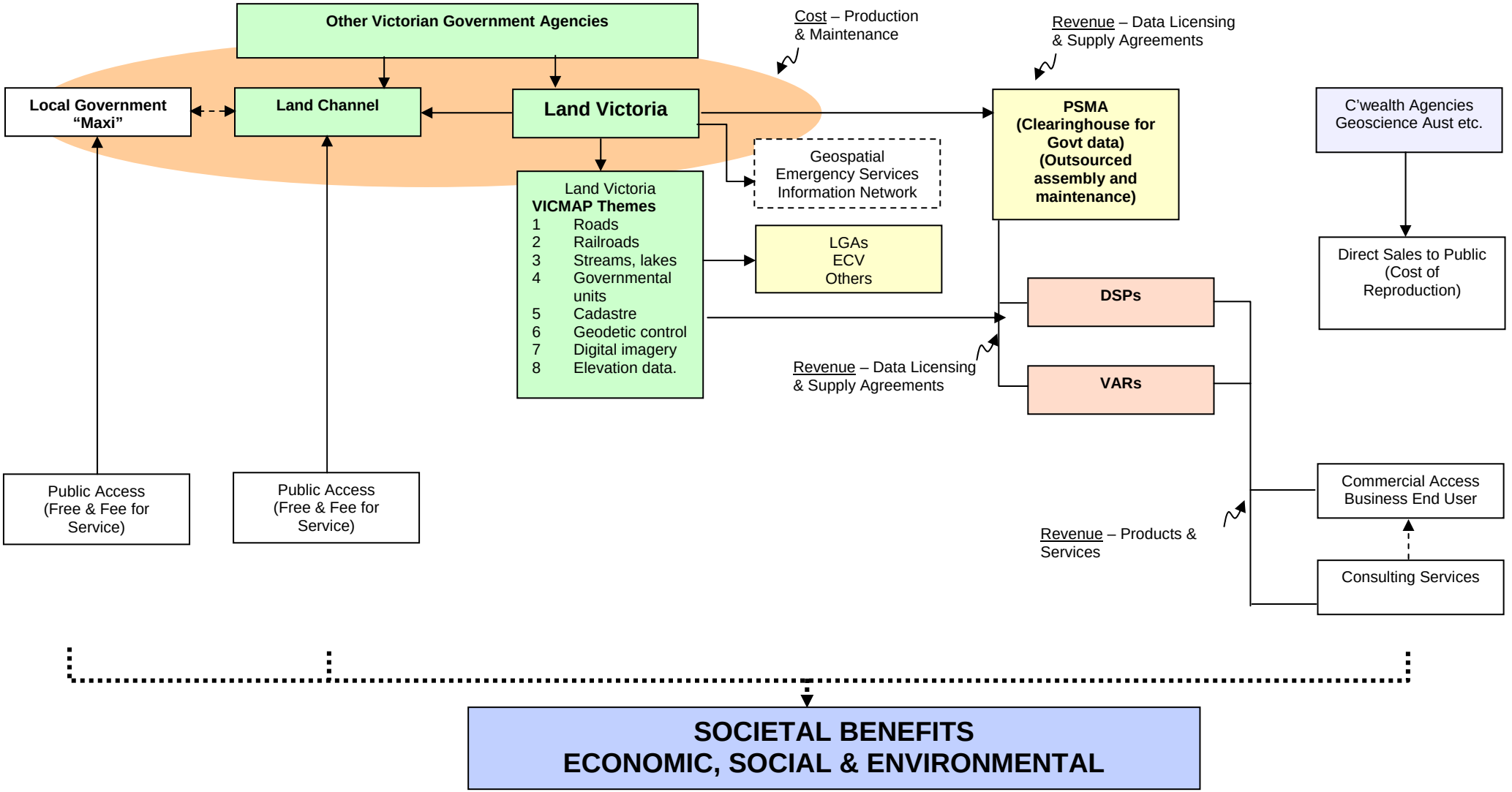
Figure 1 Geospatial Access and Distribution in Victoria



The anomaly continues to be Australian Bureau of Statistics which adopts a cost recovery policy for its primary data, available through a network of DSPs and VARs.

Access and distribution policy and pricing varies across Commonwealth, State and Local Government services although it is generally recognised that the desired outcome of this investment in infrastructure is the contribution to significant social, economic and environmental benefits gained from a vibrant national and state spatial information industry.

4 DSP & VAR Arrangements

The Victorian Government has established DSP License Agreements with Private Sector Companies to distribute Government Spatial Information (mainly Vicmap Digital Products) and or provide value added products and services that utilise this information.

The network of DSPs is broadly grouped into two categories:

- Data Service Providers who are licensed to on-sell Vicmap Digital and available government spatial data in its raw or basically unchanged state ("Resellers"). They may supply the data in different computer formats or via differing media for all or parts of the State.

  DSPs who on-sell Spatial Information as Resellers pay an annual Licence fee for the rights to access and sell the information under certain terms and conditions. They also pay Wholesale Licence Royalties on data sales on a sliding fee basis, which is set by Government and varies according to projected agreed product sales volumes.

  All fees or royalties on data sales are reported and paid either monthly or quarterly.

- Data Service Providers with specialist applications that have Vicmap Digital and government spatial data integrated within the products and services ("Value Added Resellers" (VARS)).

  VARs who have a licence for the provision of value added products and services are negotiated on a case by case basis. VAR product and service fees are generally based on an annual access or right to use fee plus a negotiated % royalty return of the RRP of the product or service.

  All fees or royalties on data sales are reported and paid either monthly or quarterly.

Licences

All DSPs and VARs are required to enter a Data Licence Agreement, which are for set periods ranging from 1 – 3 years. All licences are reviewed at least annually with the Licensee.

It is possible for a DSP to hold both a Resellers and VAR License.

5 Victorian Government Cost Recovery and Pricing Policy

Victorian Government policy influencing the pricing of Geospatial information access and distribution in Victoria are based on the following Guidelines:

- ❑ Output Costing Guide
- ❑ BFMG-21 Setting Fees and Charges

Below are a number of extracts from these guidelines. They are presented 'as is' without the author's interpretation or simplification of how they apply to spatial information in particular.

The Department of Treasury and Finance (DTF) Output Costing Guide states that accurate costing is an important component in deciding the price to charge for products and services. . . . 'In the longer term, organisations seek to cover the full cost of production. In some instances, products and services may be 'sold' for a price equivalent to the marginal cost of production. These circumstances include market penetration . . .'

'Under output management, the price paid to departments for outputs funded by Government will be set by Government. The price will reflect an assessment of production costs, market prices and best practice service provision.

Prices set for products and services sold to third parties should be based on full cost recovery. In some cases these prices need to reflect the impact of the Government's competitively neutral pricing principles.'

BFMG-21 Setting Fees and Charges Imposed by Departments and Budget Sector Agencies indicates the following:

User Pays

Charges that are set according to user-pays principle (i.e. where recovering the cost of provision is the aim of the charge) should generally be set, at a minimum, on a full cost recovery basis, unless there are explicit policy public good reasons for not doing so [e.g. where the agency providing the service has a monopoly over the market or where there are consumption externalities associated with the provision]. In all cases costs should be adjusted to ensure competitive neutrality, as afar as is practical consistent with an assessment of public policy consequences and if appropriate, a public interest test.

'Goods and services supplied on a commercial basis in an open market may be set above full cost recovery level, reflecting the costs faced by private sector competitors …' in accordance with Competitive Neutrality Policy.

Regulatory Fees

Regulatory activity is intended to elicit a particular behaviour and generally produces some form of public benefit. Regulatory fees are characterised by granting access rights to engage in a desired activity. Access is usually in the form of a permit or license enabling government to regulate activity as an instrument of government policy.

Inter-Departmental Fees and Charges

Charges should apply to inter-departmental products and services for which there are private sector alternatives. Inter-departmental charging is also appropriate in situations where it improves resource allocation decisions.

Land Information Output Review (relating to spatial information)

The Land Information Output Review recommended the following Cost Recovery Policy (which was subsequently endorsed by ERC in April 2003):

"... future pricing of land information data reflects the value attributed to the data by its users as well as the full cost of producing the data."

The Output Review also noted that "... the future funding and pricing structure should reflect a staged transition to full cost recovery, taking into consideration an appropriate mix between public and private sector users and the scale and timing for recovering full costs".

There would appear to be grounds for negotiation to fine tune the above policy if an appropriate case could be mounted related to the impacts of current access and distribution arrangements on 'triple bottom line' benefits to the State.

6 Current Access & Distribution Issues

Preliminary discussions with DSPs, VARs and end users highlight the following issues (to be investigated further at the Workshop):

- Access to government data beyond the framework data sets needs to be improved;
- Pricing remains an issue when the product quality fails to meet expectations (format, content, projections, datum errors);
- Uncertainty surrounds the implications of the Geospatial Emergency Information Network (GEIN) and whether DSPs will have access to the full data supply market which may significantly change the marketplace currently filled by DSPs;
- An expectation that freer access to data will stimulate the market for services and value adding with flow-on benefits to all Victorians;

- Whether web services are currently economic for small customers (that are 'in- between' the single enquiry and the organisation requiring bulk commercial supply) perceived to create a significant gap in cost effective access affecting a large part of the SME market for spatial data;
- There is no published comprehensive library of available State data sets;
- The potential for DSPs established by companies also providing consulting services to substantially discount the price of data, to achieve a competitive advantage;
- The limited applicability and timeliness of current data for business intelligence uses (i.e. banking, health and insurance etc.);
- The profile of the market place for spatial data and whether small business end users (the majority) are appropriately catered for with current access and distribution arrangements;
- Standard (consistent) conditions for pricing and data access mechanisms;
- The perception that current DSP arrangements add another layer of management without significant benefits to end users (too many fish feeding off the food chain);
- Whether DSPs / VARs have sufficient understanding of the data and knowledge of end use applications to fulfill customer data / value adding requests;
- The need to improve data maintenance to avoid recurrent errors identified by end users; and for end user value – adding to be reflected in most recent released data sets;
- An expectation that more competitive pricing will lead to increased use of spatial data in the commercial sector;
- The potential conflict of interest where companies acting as DSPs provide consulting services (including issues of confidentiality in companies sourcing data at competitive prices for specific projects);
- The need to develop capacity in the private sector for growth of the spatial information industry in Victoria;
- The need for more automated (simplified) processes to order and receive data;
- Clarity in licensing (definition of a 'user')
- Inconsistency between State, Commonwealth and PSMA pricing;
- The need to protect DSPs and VARS attempting to make a sole business out of data rather than as adjunct to providing consulting services.

It is proposed that Workshop participants will attempt to prioritise these issues as the basis for developing improved access and distribution arrangements in Victoria.

7 National and International Approaches

In addition to the Commonwealth policy encouraging the 'cost of supply' provision of spatial data (section 3 of this Paper), the emergence of the PSMA as an integrator and distributor of national data sets derived from component State and Territory data sets provides an alternative model for consideration.

Public Sector Mapping Agency (PSMA)

The PSMA provides a clearinghouse for government data by 'unlocking and integrating the significant data holdings held in individual governments and delivering it to the private sector as seamless, standards compliant, continent-wide data sets. The private sector then adds ideas and innovation to develop products and services to meet market demands' [Hedberg, Paull and Bower, 2003]. These authors acknowledge that Australia's small population base (or market) makes it difficult to establish a viable business in selling access to national geospatial data sets, limiting the major sources of national framework data to Commonwealth, State, Territory and Local Governments.

The PMSA is a 'wholesaler' to the Private Sector which assembles, integrates and maintains datasets through a competitive tendering process. Revenue sufficient to fund the entire operation, generated through data licensing and supply agreements is used to maintain existing datasets and develop new national datasets.

International Initiatives

Spatial data infrastructures are being developed in over 40 countries [Rhind, 2003]. Table 1 contrasts characteristics and underlying philosophies for selected countries.

Table 1 Selected Country Comparisons – SDI and Implications for Access and Distribution

Country	**Characteristics**	**Underlying Government Philosophy**
USA	Information is in the public domain. Federal agency geospatial data is available to the public free or at nominal cost. Information is treated as a 'public good' with open access and prices set to recover reproduction and distribution costs, with no copyright and no restriction on data usage.	Greater access to data will result in economic activity that substantially exceeds the revenues generated from cost recovery through the sale of data. [Population: 290 million]
Country	**Characteristics**	**Underlying Government Philosophy**
Canada	Government holds 'Crown copyright' as the owner of the data and sells it to the user (including interdepartmental sales)	Government charges a fee for supply of geospatial data to generate revenue for maintenance; and applies copyright to protect the integrity of the data [Population 32 million]
United Kingdom	Government 'partners' with the private sector where the partner is licensed for 3-5 years to distribute Ordinance Survey (OS) data on agreed terms. Data generation is outsourced to ensure timeliness. OS is responsible for ensuring data quality. OS offers a variety of copyright licenses to address business needs.	Ensures that the Government benefits from business ventures that involve value-adding or publishing for commercial use. [Population 60 million]
New Zealand	Data collection, production and distribution is carried out by a state owned enterprise; with marketing, administration and quality control carried out by government. (Potential for production to become a private venture).	Government treats data as a Capital Item and seeks recovery of all current costs of maintaining the database. [Population 3.7 million]
France	Awards 5 year contracts to secure revenue to cover the cost of reproduction, data storage, printing and sales and some contribution to map compilation.	Currently partial cost recovery which is in the order of 50 % of actual costs. [Population 60 million]
Germany	The cost of collection and maintenance of geospatial data is predominantly funded by taxpayer revenue.	Very low cost-recovery where the recovery of actual costs is in the order of 10 percent. [Population 82 million]
India	Delivery of spatial information is the responsibility of the State.	'Spatial information should be provided from general taxation as it plays a major role in the foundation of national growth and the data sets should be treated as national assets to be made available, without much restriction, to the user society at a nominal cost.' (2) Propose a uniform code for commercialisation of data and services for better cooperation between agencies. [Population 1.05 billion]

8 Conclusions - The Challenge Ahead

Table 1 indicates that government philosophy plays a large part in the infrastructure, access and distribution models adopted by countries. Rhind suggests that the 'ideal of having [these] information in machine form, manufactured to common and publicly defined standards, to be interoperable and with ready accessibility' has not yet been met in any country.

Section 7 of this Paper highlights local issues related to current access and distribution arrangements, some of which are fundamental to the success of the private sector continuing to operate sustainably in the spatial information marketplace.

In the USA, a Presidential Order identified the following primary areas to promote the development of the NSDI, which also has relevance to the Victorian situation:

- development of standards;
- improvement of access to and sharing of data;
- the development of a National Digital Geospatial Data Framework (geodetic control, topography, hydrography, transportation, administrative boundaries, place names and cadastral information). The framework is intended to form the foundation for the collection of other data, minimise data redundancy and facilitate the integration and use of geospatial data in combination [Rhind 2003].

While the concept of framework data sets are well established in Victoria, it would appear that the issues of standards and access to and sharing of data remain as issues impacting on end-users, with DSPs and VARs caught in the middle, compounded in some sectors by perceived disproportionate pricing given the quality of the products delivered.

Rhind also draws on a recent US report on the NSDI, on the consequences of seeking private/public sector partnership in developing the NSDI which include the 'requirement for the private sector to generate profits from trading in information and in financing infrastructure which require a more cohesive and industry friendly policy on information ownership and massive investment by government to convert its data into more coherent, consistent and object-oriented form.' He concludes that '. . . partnerships of this kind – as opposed to normal contractual arrangements with the private sector working for the government – are difficult to make work.'

In the UK, funding arguments to support the production and maintenance of geographic information have been won based on the long term benefits flowing from the widespread use in government of better information to underpin government policies on transport, equality of access to services and environmental sustainability etc. This implies that if the government is achieving the full benefits from optimised use of GIS in its own right, then the return on its investment to compile and maintain the data should be well and truly covered. Rhind further concludes that ' . . GIS, geographic information and a national spatial data infrastructure are not important in themselves, **but only in what they can help to achieve**.'

Currently there is a significant shortfall in return on investment in spatial data management systems because information cannot be used in combination to get added value without significant additional work by the end-user. The success of DSP and VAR Arrangements is therefore directly related to the quality of the product and the policies and infrastructure in place to service the marketplace.

References:

1. **Hedberg, O., Paull, D. and Bower, M.** PSMA Australia Ltd. Spatially Enabling Australia through Collaboration and Innovation.
2. **Ramamurthy Prof V.S**. Secretary, Dept of Science and Technology New Delhi. Maponomics – In the Changing IT Scenario of India,
3. **Rhind, D**. Vice Chancellor, City University, London. Lessons Learned from local, National and Global Spatial Data Infrastructures.
4. **Treasury, Department of**, Output Costing Guide.
5. **Treasury, Department of**, BFMG-21 Setting Fees and Charges.