

***Service Tasmania Online***  
***Resource Discovery Service: Innovation in customer driven technology.***  
***A technical paper***

*Service Tasmania* makes it easier for Tasmanians to access a broad range of government services over the counter through *Service Tasmania* shops, over the phone and over the Internet.

*Service Tasmania's* recently launched web site, *Service Tasmania Online* can be found at [www.service.tas.gov.au](http://www.service.tas.gov.au). This site uses innovative, locally developed technology, in the form of the 'Resource Discovery Service' (RDS), to provide online access to the State, Federal and local governments from the one entry point. This means that in terms of online services, Tasmanians no longer need to know how government is structured to find what they want. They can look for and access a vast range of web resources in many different ways.

*Service Tasmania Online* also offers a range of online bill payment services for the State Government and some local governments, application forms, and enquiry, help and feedback facilities.

### **The key objectives**

The aim of *Service Tasmania Online* is to provide flexible access to the widest range of resources on the web primarily for the State Government, but also for the Federal and local governments. This requires accurate and current descriptions - otherwise known as *metadata* - of those government resources. In order for the system to access the full range of resources, the metadata also needs to be independent of the resources described - that is, independent of the extent or quality of original descriptions of web content by the creators.

1. *Service Tasmania Online* is therefore based on a central metadata repository, together with simple methods to allow data input and maintenance, plus tools to ensure quality is maintained. Librarians from the State Library of Tasmania carry out the professional task of indexing of resources to ensure metadata is consistent and accurate thus making the resources easily accessible through the site.
2. *Service Tasmania Online* uses the metadata to provide all navigation and content on the web site. This reduces the workload associated with site maintenance and management. Information about what and how users search, as well as data about unsuccessful searches, can be collected and used to continuously improve the customer focus of the web site. This ensures *Service Tasmania Online's* continual evolution as a user friendly and highly adaptable web interface.

3. In line with *Service Tasmania*'s objective to develop customer driven services, *Service Tasmania Online* is designed to allow users to search for information and services in a variety of ways. Importantly, the site does not require an understanding of how the three tiers of Government are structured, and is based on the needs and strategies of the clients themselves. This is made possible by a navigation structure which allows customers to search for information and services in a variety of ways, with cross-linkages at various points to other views of the data, and with contextual free text searching available throughout.
4. The development of *Service Tasmania Online* was also predicated upon a number of additional requirements of a technical nature, including the:
  - capacity to cope with large amounts of data and a high site demand;
  - ability to be configured to allow operation despite the loss of the home server;
  - automatic validation of the presence of sites after routine harvesting, and the exclusion of missing sites from result displays;
  - utilisation of industry standard software where possible; and
  - incorporation of national and international standards for data maintenance and access.

These four key objectives were bundled into a specific application model called the Resource Discovery Service (RDS).

## **Software development**

The RDS builds on the *Discover* software package previously developed for the Tasmanian State Government's Department of Education. The package incorporates a central data repository based on eXtensible Markup Language (XML) and a powerful search engine able to retrieve information from those XML files. It also allows central metadata management, adherence to national standards, and devolved data entry and maintenance.

Initially the package lacked the capacity to dynamically create and provide web site navigation from the metadata itself, but it was both feasible and cost effective to extend *Discover's* software functionality to meet *Service Tasmania Online* needs.

## **Technical components and standards**

A summary of the RDS' technical components and standards are outlined below.

### Data storage

- data files kept in XML format.

### Data input

- Web-based entry screens, Version 4 browsers with Javascript capability.

#### Data quality management

- data control lists as specified in the Australian Government Locator Service (AGLS) and Education Network Australia (EdNA) standards.

#### Search Engine

- SiteServer from Microsoft for specific harvesting of metadata-linked resources and robotic harvesting of general government resources.

#### Web site presentation

- HTML based graphics for Web site presentation.

#### Web site navigation

- mixture of ASP controls using SiteServer display syntax controls.

#### Access by other services and government jurisdictions

- HTML harvestable lists and HTML visible AGLS metadata.
- LDAP and Z39.50 available when required.

#### Hardware

- Microsoft NT Operating System.
- Two tandem servers linked for redundancy.

### **Development stages**

The RDS has been developed in a number of stages, based on resource availability and the need to provide early outcomes whilst retaining long term flexibility. To this end, the basic system became operational in April 2000, with enhancements and extensions then following on a regular basis. A range of additional developments have been provided, including synonym substitution in free-text searching, enhanced sorting and display options, sophisticated site usage analysis, and additional data views for retrieval.

### **Content development**

The provision of the *Service Tasmania Online* web site requires the existence of a pool of high quality metadata. An assessment of potential resources indicates that the STO site is likely to house over 3000 metadata descriptions when fully operational. Using the AGLS metadata standard, cataloguing staff in the State Library successfully reached the initial target of creating a core set of 1000 metadata resources by April 2000. By January 2001, *Service Tasmania Online* contained ca 3000 resources from all three tiers of government.

A significant enabling component of RDS has been the development of a natural language, browsable hierarchy that guides navigation through the Web site. Reflecting

both government services and customer needs, the hierarchy allows users to quickly choose the information they are seeking. This hierarchy can be combined with other metadata fields describing target audience, life event, task etc to produce a highly flexible, varied and configurable navigation system that can be tailored to suit the needs of the user.

### **Site usage**

An analysis of the first nine months of operation has proven the value to users of providing a range of access points.

- Subject searching: 30%
- Free text searching: 30%
- Task: 15%
- A-Z Listings: 10%
- Target audience: 9%
- What's new, etc: 6%

### **Future development plans**

The RDS software package is well placed to meet the needs of any information service that attempts to provide structured access to online information resources via the World Wide Web. In addition to allowing either central or distributed data creation, it has the great advantage of using the XML data itself to dynamically provide access and navigation. This significantly reduces maintenance costs, and increases the accuracy and currency of the web site. It also allows a highly flexible and configurable approach to the way information is provided.

For more information about *Service Tasmania Online's Resource Discovery Service* contact Lloyd Sokvitne on 6233 7632 or via email at [lloyd.sokvitne@central.tased.edu.au](mailto:lloyd.sokvitne@central.tased.edu.au)

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