

Invited Paper

Between a Rock and a Hard Place: Dealing With NZGLS Development Issues

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Abstract

This paper summarises key development issues encountered with the New Zealand Government's discovery level metadata standard, NZGLS. In particular, it discusses the need for governments to be able to support discovery of services, and the range of standards which affect the development of a Dublin Core based discovery metadata set.

Keywords: NZGLS, metadata

Background to NZGLS

NZGLS is the New Zealand government's discovery metadata standard, and is based directly on the Australian AGLS, and therefore on Dublin Core. Over the past year, NZGLS has been developed by a Whole-of-Government Working Group, drawing on Australian experience in implementing AGLS. Version 1 of the standard was released in April, and followed by significant user testing.

Review of this test phase, and the emergence of clearer requirements from other projects in the New Zealand E-government program have shaped the development of version 2, which was recently released.

This paper examines a few of the key issues which have emerged over this period as influences on the development of NZGLS, and as challenges for its ongoing operational effectiveness.

Services

One of the critical areas for discovery metadata in support of e-government programmes is its ability to support not only the discovery of information resources, but of services. At its heart, e-government worldwide is about improving the ability of citizen-state interaction. While better access to government will go some way to supporting this mission, its success will depend on

improving the ease with which the public can actually transact with government.

'Service' is a term much used, with little consistency, or precision. Services are activity type entities.

New Zealand has taken the view that services are distinct entities which need to be, and can be, described within a discovery metadata system, but are different from documents and other information resources. We have emphasised this distinction, for example by requiring web pages, brochures, or even forms which describe or support the delivery of a service to be described as 'document' resources - related to, but distinct from the service itself.

This is a complex area, in which experience is limited. Effective service description will involve metadata in the 'function' space, however there are a number of different concepts occupying parts of this space. Some of the questions we are grappling with include the best treatment of service channels - are free phone, web-based, and counter-based delivery channels more akin to formats of a single service, to different versions or editions of a service, or to different services?

One part of the picture on which New Zealand has focused its initial efforts is the development of a thesaurus of activity types - eg registering, legislating. These controlled terms will be used in a 'function' element to enable the discovery of particular forms of government activity.

Part of the answer will depend on the value placed on customer perceptions. Service is typically articulated as a customer-centric view. It is important to distinguish services from the organisational structures which deliver them, but it may be problematic to try and leave services as completely customer defined entities. Similarly, public users have little understanding of distinctions between

'subject' and 'function' as tools for discovery. Typically they want to find services or resources 'about' something. This highlights the distinction between interface design (how we present to the user) and metadata design (how we articulate the characteristics of the resource).

E-Government drivers

The use of metadata in an e-government program will be influenced by the broader needs of that program. In New Zealand, several details within the NZGLS standard have been dictated by the needs of the broader program and of its portal strategy in particular. NZGLS metadata will need to be sufficient to support the functionality which the portal wishes to deliver.

This is perhaps most obvious in terms of the desire to support service-oriented views of government, as discussed above. This has led to both 'function' and 'subject' elements being made mandatory within NZGLS.

Other functionality which impacts is the desire to provide for 'communities of interest', according to factors such as age, occupation, gender, or on a self-defined basis. This has led to the inclusion of an 'audience' element.

New Zealand has two official languages, English and Maori, and the ability to provide an effective bi-lingual portal is an issue of ongoing interest. Key questions include decisions as to which aspects may be represented by alternative language metadata, and where tools to reflect a different world view may be required.

Compatibility

NZGLS was originally based on the Australian AGLS schema, because that model had already adapted Dublin Core in response to issues also faced by New Zealand, such as the description of services.

Questions of ongoing compatibility with AGLS, with Dublin Core and with myriad other current and emerging standards has been a significant issue. One example relates to the elements 'creator', 'publisher' and 'contributor'. In development and testing of NZGLS it was repeatedly suggested that these elements could be merged with roles of various agents distinguished by qualifiers. We understand there has been similar discussion

within the DC community. Many also felt that 'source' was a particular form of 'relation' undeserving of its status.

Such situations raise difficult questions - when should an implementation community depart from another standard in the expectation that similar change will follow? How much damage (loss of credibility, cost) is done by implementing a standard which then changes?

Dublin Core is not the only standard whose changes impact the development of NZGLS. Emerging standards for resource description in particular communities are of some significance, particularly those in the geospatial data community.

An emphasis on services brings increased attention to spatial characteristics - where can the customer obtain the particular service? The recent development of ISO 199115 has been watched with interest, as a tool for defining spatial limits. This has also highlighted the need to utilise standards - or aspects of standards - which will be used by particular communities, minimising the existence of parallel and potentially incompatible ways of describing the same characteristics of a resource.

Inter-operability remains an important goal. While it is inevitable that individual sectors and jurisdictions will develop their own applications, consistency will enable the development of tools which are portable across domains, as well as enabling the discovery of resources across diverse implementations. As Governments around the world grapple with the same problems in making effective use of technology in delivering government to citizens, it is critical that extensions to the existing Dublin Core are developed with broad consensus.

Recordkeeping metadata

The relationship between discovery metadata and recordkeeping metadata has been a recurrent theme in New Zealand, and we note in other jurisdictions. In some sense the two are quite different - recordkeeping metadata seeks to manage records as authentic and reliable evidence over time; discovery metadata seeks to enable the identification and location of a resource at a point in time.

Recordkeeping metadata will seek to contextualise to allow the information to serve as evidence of action at a particular time, place and situation. The importance of the business context to recordkeeping has seen it give prominence recently to description of function. Recordkeeping 'functions' are specific functional contexts, unlike the generalised models used in discovery. Both have valuable roles to play - the key is to distinguish between them, and identify which is appropriate in a given situation.

More generally, some characteristics used for discovery will also be present in recordkeeping metadata sets. As with other standards mentioned above, there is value in ensuring common semantics - where appropriate - between recordkeeping and discovery metadata. Recordkeeping systems may also be able to provide useful insights in documenting changes in the characteristics of content over time.

Conclusion

These observations are a brief selection from the experiences of the NZGLS process. They highlight above all the number of influences which need to be considered in development of discovery metadata. Discovery processes exist in a network of other standards, and are subject to many pressures in implementation to meet local agendas. The Dublin Core Metadata Element Set provides a strong base for further development of widely agreed metadata.