DigitalNZ ā-tihi o Aotearoa: Connecting the Digital Content of New Zealand: Advice, Open Standards and Interoperability

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Abstract

DigitalNZ ā-tihi o Aotearoa aims to connect New Zealand's digital content from collections of significance and find ways for New Zealanders to engage in, use and reuse the digital content. DigitalNZ advise digital content providers to use open standards and to do this developed a standards based advice framework containing seven primary functions for the selection, creation, description, management, discovery, use and reuse, and preservation of digital content. The use of Dublin Core metadata can be incorporated into most functions of the standards advice framework.

DigitalNZ ā-tihi o Aotearoa is a nationwide initiative implemented by the National Library of New Zealand and an outcome of the government's New Zealand Digital Content Strategy (2007). Intended as a long-term programme of work DigitalNZ aims to find ways to make New Zealand's rapidly growing digital content more visible, discoverable and accessible in an ever-changing digital environment. DigitalNZ aims to connect New Zealand's digital content from collections of significance and find ways for New Zealanders to engage in, use and reuse digital content.

To maintain the integrity for New Zealand's digital content over time open standards and formats are supported and promoted by DigitalNZ. To support this a standards advice framework for the adoption, dissemination and promotion of open digital standards has been developed.

The first DigitalNZ initiative was launched as DigitalNZ Wave 1 in 2008 and was tasked with building the foundation and infrastructure for DigitalNZ ā-tihi o Aotearoa. Wave 1 was tasked with exploring and testing ways in which New Zealand's digital content could be harvested from content providers and exposed for use and reuse. The mantra of DigitalNZ Wave 1 was *Find, Share, Use*, New Zealand digital content.

To promote interoperability for the DigitalNZ initiative the Wave 1 team developed a standards advice framework to assist digital content providers. The framework contained the functions to create, describe, and manage digital content to make it harvestable, searchable and reusable.

To develop DigitalNZ's standards advice framework an analysis was made of information standards for digital content including international and national standards, best practice, protocols and profiles. A "wide" definition for "standard" was used. To be included standards needed to have been through some due process to reach consensus, easily available, published by a trusted and not for profit organisations, in mainstream use and have uptake by trusted organisations. A range of different types of standards for different purpose was included, for example, file format types, resource description and transport protocols.

In developing and turning the complex world of standards into practical advice DigitalNZ analyzed frameworks such as the NISO's Framework of Guidance for Building Good Digital Collections (2007), models such the OAIS functional model (2002), and researched online services already providing digital advice for example, JISC Digital Media (2009).

The DigitalNZ standards advice framework needed to be relatively easy for content providers to follow and yet incorporate complex information about standards. An information life cycle

(Hodge 2000) was used as a starter to develop seven high level functions for the selection, creation, description, management, discovery, use and reuse, and preservation of digital content. Although there was some overlap of activities across the functions it provided a framework to work with that would be easy to follow for those starting out on the digital content creation journey.

Table 1: Seven high level functions for the DigitalNZ Standards Advice.

Function	Description
Selection	Framework for Good Digitisation in New Zealand (2009) provides guidance on selecting content for digitisation
Creation	Provides good practice for selecting digital formats for the usability of digital objects for different purposes
Description	Describing is primarily about metadata, with Dublin Core metadata, highly recommended
Management	Describes a number of activities including harvesting, transport protocols, syntax and encoding, storage and repositories and authentication.
Discovery	A focus on search protocols and metadata
Use and reuse	Rights management
Preservation	Preservation and archiving of digital content

DigitalNZ Wave 1 began the task of providing to small and medium sized New Zealand organisations a series of primer guides about digital content. The guides have open standards and interoperability at their core and use of Dublin Core metadata is highly recommended. Primer guides for the creation, description, and use and reuse of digital content are now available on the DigitalNZ ā-tihi o Aotearoa website (2009). The use of Dublin Core metadata features in the primer guide for description. It is anticipated that over time use of Dublin Core metadata will by incorporated into most of the functions, for example, the management function for harvesting, syntax, and repositories, and the discovery function for search.

DigitalNZ strives for openness and interoperability for systems and data and in Wave 1 worked toward developing a DigitalNZ OAI-PMH harvester to collect simple Dublin Core metadata from digital content providers. The harvester is now collecting Dublin Core metadata and aggregating it to a Dublin Core based metadata store for discovery and reuse.

Not all DigitalNZ content providers have OAI-PMH repository software enabled and so DigitalNZ make it easy by providing alternative options to contribute their metadata. The options include XML sitemaps to extract metadata, RSS feeds to monitor new content, and community Kete. Kete is open source software for communities to create online areas for collaboration and to write and upload images, audio, and video. Kete has Dublin Core metadata at its core.

DigitalNZ has created various showcases to demonstrate the possibilities for use and reuse of metadata including a search widget builder, a tool to mashup DigitalNZ content, and a remix editor to explore issues around digital rights management.

DigitaNZ will complete Wave 2 and 3 in 2009.

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