



The Irish Public Service Metadata Standard

Version 1.0

Part 1 Framework

August 2001



Executive Summary

Information is the primary output of government. The volume of information produced by government and its agents is growing at an ever-increasing rate, and bringing order to the mass of information produced is essential to ensure its continued availability, use and value. With this purpose in mind, a metadata standard, serving this body of information and its user population, was devised.

Metadata is information about information. It facilitates the finding of information by the assigning of consistent descriptors to information resources.

The Irish Public Service Metadata Standard (IPSMS) resulted from the process of establishing an appropriate metadata standard, the primary focus being the discovery of information by the citizen and sectoral interests such as the farming and business communities.

One of the key decisions in the creation of the IPSMS was the decision to adopt the Dublin Core metadata element set. Dublin Core is the metadata standard receiving most widespread support across the globe and across different user communities. Indeed a number of national governments have adopted the Dublin Core standard as the basis for their own schemes.

Other key decisions include the mandating of the IPSMS for use by public sector organisations and the decision to develop a thesaurus for use in conjunction with the standard.

The IPSMS forms an integral part of efforts to help the user find public service information more quickly and more easily. The standard must achieve widespread support across the public service to help ensure a consistently high standard of public service information provision, and this purpose must be supported by a lead agency dedicated to the task of maintaining and progressing the standard and providing support and guidance to the user population.



Introduction

Information provision and the manner of its presentation are becoming increasingly important activities for Government. The volume of information being made available to the citizen via public service websites is growing at an ever-increasing rate. It is essential that both access to information and the ability of the citizen to locate information relevant to his or her needs is enhanced where possible.

Information plays an important part in both economic activity and personal decision-making. Government information is being seen as an increasingly important economic asset, and its availability and the ability to locate it are essential to the workings of government and its interaction with both the business community and the citizen.

Those providing and making available information in the public sector increasingly recognise the growing importance of the Internet as a medium for the delivery of, and access to, information. There is a growing recognition that merely putting the information on the web is not enough: consideration must be given to issues such as quality, presentation, accessibility and whether or not available information can be retrieved.

Metadata facilitates the discovery of information. The tagging of information resources allows the end user to find what they are looking for and determine the suitability of information resources. To be effective, and to instil a confidence in the end-user that all public sector resources are equally accessible, the tagging must be consistent in use and application.



Background

The Irish Public Service Metadata Standard (IPSMS) has been developed as a result of a requirement to assist citizens in the location of public sector information and services. It forms a key building block in the development and provision of public sector on-line information and services.

The importance of a metadata standard for Irish public sector organisations was first acknowledged in the recommendations included in the **Recommended Guidelines for Public Sector Organisations** Web Publication Report of the Interdepartmental Group, October 1999;

Recommendation #6.1

It is recommended that all new documents be described using metadata tags and, in so far as is possible, existing information should also be tagged [extract].

Recommendation #6.2

The standard set of metadata elements recommended by the Group is based on a widely accepted standard known as the Dublin (Ohio) Core Metadata element set [extract].

The report of the Interdepartmental Group on web publication was in fulfilment of the commitment given in paragraph 42 of the **Government Action Plan on the Information Society in Ireland**;

Service-wide guidelines and practices will be adopted regarding content format and presentation etc. for websites, and an Inter-departmental group will be established to deal with these issues.

A Metadata Working Group was set up to examine the issue of metadata, followed by the appointment of a Metadata Project Co-ordinator charged with examining the various standards for cataloguing and describing information on the Internet, the requirements of the Irish Public Service, and with recommending and documenting a standard meeting those requirements.

As part of the process, a consultation paper was made available inviting comments and contributions. As a result of the investigations and recommendations of the Metadata Project Co-ordinator, and the feedback from the consultative process, the Metadata Working Group agreed the proposed standard, to be known as the Irish Public Service Metadata Standard (IPSMS).



Metadata

What is metadata?

Metadata simply described is ‘information about information’. It enables people to search for and locate the information they need on the Internet, and can help them to determine whether or not a particular information resource is the one that meets their needs.

Metadata facilitates the finding of information by allocating precise descriptors to a document. In effect it is summary information about a resource. As such, it helps in the identification, location and retrieval of online resources by end-users.

We are exposed to metadata in our everyday lives, often without realising it. When we look up a mail order catalogue to select a consumer product. When we look up a library catalogue to locate a book. We are facilitated in finding and selecting products by exposure to summary information describing the content, the availability, the nature or the constituents of those products.

In relation to online information, metadata can answer the following questions:

- Who is responsible for producing the content and making it available?
- What is the subject matter?
- Where can I locate it?
- Why was it provided?
- What language is it in?
- When was it produced and last updated?
- Can I access it on my computer?
- From what sources was the information compiled?
- What is the intended audience?
- Are there restrictions on its use?

Metadata can also facilitate the management of records, by including such information as when a record ought to be archived or destroyed, who has access rights and rights to amend, and a change history of the record.

Benefits of Metadata

The concept of “information overload” has become an all too familiar one with the vast amount of information available in electronic form. One of the problems associated with having a vast amount of information available is the difficulty in finding the right information. Information available via the Internet can be of variable quality, and it can be difficult to verify its authenticity and value.



In conjunction with a search engine capable of performing a metadata search, metadata can greatly facilitate the user in locating the information they seek and thus reducing the problems associated with vast quantities of information being available for searching.

- Document creators and providers making use of the same elements to capture and display particular data facilitates more precise and accurate information retrieval.
- Document owners are facilitated by the identification of a clear and consistent set of metadata elements for the storage of information about those documents.
- Metadata contributes to the integration of public services online through the improved means of retrieval resulting from standardised data entry and description.
- Consistent use of metadata facilitates information sharing across systems and organisations.
- More precise searches result from the facility to search on particular elements. For example, with metadata descriptors it is possible to distinguish between a search looking for **Joe Green** in the *Creator* field and **The Green Paper on Adult Education** in the *Title* field to help the user find precisely what they are looking for.
- Search precision is enhanced by the ability to provide relevant details about a resource, details that may be missing from the actual resource itself. Terms accurately relaying the concepts inherent in a document but missing from the body of the document can be readily included.
- It becomes easier to locate information and the time spent searching is reduced.
- Metadata provides for a way to store relevant, clear and consistent data.
- Maintenance is helped by allowing for the identification of information that requires updating or archiving, or that has not been updated for a certain period of time. It can indicate who is responsible for maintaining a record and when it ought to be reviewed.
- Care given to the creation of metadata can be evidence of the quality of the resource described and the information provided.
- The metadata can act as a surrogate or summary that facilitates the selection process. By viewing a metadata record, users can determine the suitability of a document.



Key Decisions

The key decisions in relation to the formation of the standard are;

- The adoption of the Dublin Core (DC) Metadata Element Set as a basis for the Irish Public Sector Metadata Standard (IPSMS).
- The endorsement of the use of element qualifiers.
- The development of a thesaurus scheme for use in tandem with the IPSMS.

This metadata standard devised for the Irish public sector is known as the Irish Public Service Metadata Standard (IPSMS). The IPSMS in its first version is primarily a resource discovery standard; however, this does not preclude the standard from being extended to facilitate other information management requirements. The principles of development and extension are necessary to allow for developing needs and the changing environment in which the standard applies.

The key decision in relation to the use of the standard is;

- The IPSMS is mandated for use by public sector organisations providing information online to both the citizen and sectoral interests. Sectoral interests include the business and farming communities.

The IPSMS applies to Irish public sector bodies in their delivery of online information. The minimum requirement is that the citizen and business community in their interactions with public sector bodies can discover the online resources provided by those bodies that they seek. To facilitate this minimum requirement, the IPSMS is mandated for use by Irish public sector bodies in their delivery of online information.

Public sector includes central government departments and their agencies; local government bodies including local authorities, health boards and other bodies that operate under the supervision of the Minister for the Environment and Local Government; and non-commercial state-sponsored bodies.

Thesaurus

A key component of the IPSMS will be a thesaurus of subject terms covering the broad range of information available from organisations in the public sector. Such a thesaurus is currently the subject of a study to determine purpose, scope and resource implications.

One of the great barriers to finding information is the difficulty of coming up with the right terminology. Standardised subject headings and thesauri are designed to remedy this problem.



A thesaurus is used to choose words consistently to describe things or concepts. Its use is important for applying consistent metadata, thereby aiding efficient and quality information retrieval.

Characteristics of the Irish Public Service Metadata Standard

The standard must be capable of meeting the current and future needs of the user community.

The standard must display enough flexibility to allow for the needs of different communities.

The standard must be simple to use and understand given the varied experience of those expected to apply it.

The standard must not be dependent on any one hardware or software platform and must be capable of facilitating discovery of records held in any format.

The standard must provide value for money.

The Irish Public Service Metadata Standard (IPSMS) must, as far as is possible, both reflect international standards and maintain compatibility with an existing widely adopted scheme. In the event that conflict arises, the needs of the IPSMS will take precedence.

Dublin Core

The Dublin Core metadata element set was developed over a period of five years as a broadly international and cross-disciplinary effort.

Dublin Core (DC) is shorthand for Dublin Core Metadata Element Set (DCMES). In contrast to other schemes that target particular types of materials and particular user communities, DCMES can be used to describe nearly any type of information resource.

The interdisciplinary Dublin Core metadata effort is considered by many to be the most obvious metadata scheme for facilitating the discovery of information in an interdisciplinary environment. It is generally agreed to be the leading scheme for achieving the goal of simple resource description for Internet resources.

One of the basic functions of the Dublin Core is the description of the contents of web pages. It consists of fifteen elements, each element being optional, repeatable, extensible and presentable



in any order. Elements can further be modified by the use of one or more qualifiers. Central to the thinking behind the Dublin Core Set is an interdisciplinary, international consensus.

DC elements consist of broad definitions and rules are kept to a minimum. The elements can be categorised into the following;

- Elements related primarily to resource content
- Elements related to intellectual property
- Elements related mainly to the instantiation of the resource

The content items include *title, subject, description, source, language, relation, and coverage*.

The intellectual elements consist of *creator, publisher, contributor, and rights*.

The instantiation elements are *date, type, format, and identifier*.

The Dublin Core standard has received NISO (National Information Standard Organisation) approval and is being submitted to ANSI (American National Standards Institute) for approval as an American national standard.

Management and Support

In order to ensure the success of the IPSMS certain supports are required to be in place and the roles and responsibilities of the different parties need to be defined.

A designated lead agency properly resourced and funded and having the following roles and responsibilities;

- maintaining and developing the IPSMS
- promoting the use of the standard
- maintaining and developing user guidelines
- maintaining a website
- providing advice and support on implementation of the IPSMS
- monitoring compliance
- liaising with the international Dublin Core metadata community
- reviewing the standard in consultation with the user community

Organisations applying the standard have the following roles and responsibilities;

- creation and maintenance of metadata in conformance with the IPSMS
- ensuring systems are in place to facilitate the process
- ensuring compliance with the IPSMS
- contributing to the ongoing development of the standard



Compliance

The IPSMS applies to Irish public sector bodies in their delivery of online information and is mandated for use by those bodies.

Compliance will be a staged process;

- All new online information content should be IPSMS compliant within six months of the adoption of the standard.
- Existing information content will need to show compliance with the IPSMS within twelve months of the adoption of the standard.

The IPSMS will be developed in line with new developments and requirements, and following consultation with the user community, updates to the standard will be approved for use by the lead agency.

Updating the Standard

While the IPSMS ought to be inherently stable, showing a capacity to serve future as well as current needs, changing needs and new requirements will also mean that the IPSMS will need to develop so as to ensure that it continually meets the needs of the user community. The IPSMS is also expected to keep up with developments in the areas of information technology and information delivery, and to take cognisance of developments in the Dublin Core and other international standards.

The lead agency has the responsibility for the maintenance and development of the IPSMS. As part of this process, it will receive submissions from, and consult with, the user community in the process of reviewing and managing changes to the standard.

All interested parties and members of the user community are to have the opportunity to contribute to the ongoing development of the standard, thereby ensuring that the standard continues to meet the needs of the user community and facilitate the purposes as set out in the standard.



Glossary

Dublin Core (DC)	An internationally recognised core set of metadata elements used for the description of web-based resources. Element A word representing a distinct unit of descriptive information. Dublin Core consists of 15 elements that together make up the DC element set.
Element	A unit of descriptive information. Dublin Core consists of fifteen elements, each of which describes a specific aspect of a resource.
Element Refinements	Refine and clarify the meaning of an element thereby increasing the specificity or precision of the metadata.
Encoding Schemes	They identify the rules or authoritative lists used to control the content of a given field.
Metadata	Machine understandable descriptive information about a resource and often simply defined as ‘structured data about data’.
Qualifier	A qualifier makes the meaning of the element more specific. Consist of element refinements and encoding schemes.
Thesaurus	A hierarchically arranged vocabulary showing the relationships between concepts represented by words or phrases. Necessary for the creation of consistent metadata.