



INSPIRE

Infrastructure for Spatial Information in Europe

INSPIRE metadata implementing rules: summary of process

Title	INSPIRE metadata implementing rules: summary of process
Creator	European Commission
Creation date	2007-04-28
Date of last revision	2008-06-05
Subject	INSPIRE Implementing Rules for Metadata
Status	Draft
Publisher	European Commission
Type	Text
Description	This document summarises the process followed in developing the proposed INSPIRE implementing rules for metadata
Contributor	
Format	pdf
Source	European Commission
Rights	Public
Identifier	IR metadata process.pdf
Language	EN
Relation	Not applicable
Coverage	

Scope

This document summarises the process that has led to the formulation of the Commission proposal for the Implementing Rules (IRs) regarding Metadata, and related guidance documents. The process can be divided into three distinct phases.

Phase 1: Review, Synthesis, First Proposal

The Metadata Drafting Team started operations in October 2005 and was given a requirements document¹ from the Commission setting out the boundaries of their activity. In particular the DT was asked to consider the Commission proposal for the INSPIRE Directive (2004) since at that stage the Directive had not been adopted yet.

During the period 2005-06, the Drafting Team analysed some 120 reference material put forward by SDICs and LMOs and analysed current practices and use of standards in the creation of metadata in the communities that had supplied the material. From the review of this material it clearly emerged that most stakeholders in the geographic information community are using the European standard EN ISO 19115 for documenting datasets and EN ISO 19119 for documenting services, or are moving from national standards towards the international ones. The use of ISO 15836, Dublin Core, is also widespread across many geographic and non-geographic communities, particularly in the e-government context. These findings were also supported by a survey of SDICs and LMOs organised in the Summer of 2006. Whilst these findings refer to the organizations, mainly at national level, which already have metadata, the Commission is also aware that in many organizations at sub-national level (regional, local) a culture of metadata, i.e. of documenting their information resources, has yet to develop.

From this review, ancillary documentation, and the Drafting Team expertise, a draft implementing rule was prepared by the DT. An initial working draft (version 1) was circulated to other DTs and the Consolidation Team in the Commission.

Phase 2: SDICs and LMOs Consultation and Review

A revised draft (Version 2) was published on the INSPIRE web site on the 2nd February 2007, and was open for comments to the stakeholder communities (SDICs and LMOs) that had registered on the INSPIRE website. Over 1200 comments were received by the end of March 2007. All the comments received, and the action proposed by the Drafting Team in response to these comments, together with the synthesis and list of key issues and actions recommended to the Commission are published on the INSPIRE web site².

From the review of the comments, the Drafting Team identified several major issues of which the key ones relate to:

1. Reorganisation of the IR into separate documents: the legally binding Implementing Rules, input to a revision of CEN documents, and guidelines for implementing the Implementing Rules.
2. Ways to express quality and validity across multiple disciplinary domains;
3. Ways to express conformity of datasets and services to the implementing rules on harmonisation;
4. Ways to express conditions for access and use including fees;
5. Clearer definition of datasets, dataset series and spatial data services to which the Implementing Rules apply;
6. Ways to express the different temporal dimensions of data in different thematic communities.

¹ http://www.ec-gis.org/inspire/reports/dt/ir_dev_process_metadata.pdf

² http://www.ec-gis.org/inspire/reports/ImplementingRules/metadata/INSPIRE_metadata_IR_draft_comments_1st_round.zip

On the basis of the work of the Drafting Team and the comments received by the SDICs and LMOs, the Commission elaborated its own proposal (Version 3³). The key characteristics of this proposal were:

1. It separated clearly: (a) the text that is the base for the Implementing Rules on Metadata (i.e. legally binding), from (b) the text to be included in guidance document to be published at a later date and that could provide input to the activities of CEN (response to key issue 1 above).
2. It acknowledged that the documentation of quality and validity (key issue 2) which is required by the Directive in Article 5-2(c) is complex and is dependent also on the more detailed data specifications that will take place in subsequent years for the themes defined in the Annexes of the Directive. With this in mind, the Commission proposal is to express Quality and Validity as the combination of two metadata elements: Lineage and Spatial Resolution, with additional information coming for the metadata elements expressing the temporal dimension of the dataset. In addition the Commission agrees to bring the issue of Quality and Validity to the attention of the thematic groups that will be working on the specification of the data themes, so that the requirements of different communities can be articulated fully.
3. Similarly, it acknowledged that the conformity (key issue 3) of spatial data sets and services which is required by the Directive in Articles 5-2(a) and 11-2 (d) can only be fully specified once the relevant Implementing Rules on the interoperability and where practicable harmonisation of spatial datasets and services required in Article 7 of the Directive are adopted. Since these Implementing Rules will be adopted from 2009 onwards, the Commission proposals are to express Conformity as the combination of two metadata elements: the citation of the specification (Implementing Rules) to which conformity refers to, and the metadata element degree of conformity expressing whether the dataset or service to which the metadata refers is conformant, not-conformant, or not-tested. In this way flexibility is retained for future Implementing Rules on interoperability to define both specifications and the testing requirements.
4. It clearly identified two separate elements expressing the Conditions for Access and Use (Article 5-2(b)), which may also includes information of corresponding fees where applicable, and Limitations on Public Access (Article 5-2(e)) which refers to the grounds for limitations referred to in Art. 13 of the Directive (key issue 4 above).
5. It stated explicitly that the Implementing Rules for metadata apply to spatial dataset series, spatial datasets, and spatial data services i.e. they do not require the documentation of individual spatial objects or attributes. (key issue 5 above)
6. It acknowledged that different thematic communities have different ways to express the temporal dimension of their datasets (key issue 6 above). For this reasons the Commission made an initial proposal on metadata elements that may satisfy the requirements but has also launched a study through an external contractor on the ways to express in metadata the different temporal dimensions of spatial data and related services. The contractor reported by the end of December 2007, and its findings have been considered in the following draft of the Implementing Rule.
7. It maintained the focus on metadata elements defined at an abstract level in order to make the Implementing Rules independent of specific encoding or possible future changes in standards. The Commission agreed to establish, in collaboration with stakeholders and relevant standardization organisations, detailed guidelines and instructions for implementation and interoperability of metadata. These include instructions on how the European standards EN ISO 19115 and EN ISO 19119 shall be used to disseminate INSPIRE metadata, should one chose to use these standards.

³ http://www.ec-gis.org/inspire/reports/ImplementingRules/INSPIRE_Metadata_ImplementingRule_v3_20071026.pdf

8. It introduced a number of value domains to facilitate the consistent implementation of the INSPIRE metadata elements in the European multilingual environment.

Phase 3: Public Consultation, Review and Proposed Implementing Rule

The Public consultation lasted 8 weeks during October-December 2007. At the end of this period, 390 comments were received. These were analysed in early 2008 and clustered around key topics which had received multiple comments. The key issues raised were:

1. Suggestions for additional metadata elements such as Coordinate Reference System, and details on how to link to a service (operations name, distributed computing platforms, access point)
2. Need for greater support for multilingual searches
3. Need to revise the Classification of spatial data services
4. Need to consider the outcome of the study on temporal metadata launched by the Commission during 2007.
5. Need to clarify further the role of the guidance documents.
6. In addition, there were several editorial changes suggested including revisions in the way in which Unique Identifiers were expressed with clear recommendations to avoid the use of free text for this element

Following extensive consultation with the Drafting Team, the Commission revised its proposal, which addresses the key issues raised above in the following way:

- It explicitly mentions that the proposed implementing rules (IRs) include the minimum set of metadata elements necessary to comply with Directive 2007/2/EC and does not preclude the possibility for organizations to document the information resources more extensively with additional elements derived from international standards or working practices in their community of interest (key issue 1 above)
- It facilitates multilingual searches by mandating the use of at least one keyword from the General Environmental Multi-lingual Thesaurus (GEMET) describing the relevant spatial data theme as defined in Annex I, II or III to Directive 2007/2/EC. In this respect, work is in progress in collaboration with the European Environment Agency to include all the INSPIRE data themes defined in Annexes I, II, and III inside a revised version of GEMET. In addition, the value domains defined in the proposed IRs include not only the textual name of each value domain for humans, which may be translated in the different community languages, but also a language neutral name for computers expressed as a character string that must not be translated (key issue 2 above).
- The classification of spatial data services is required by Article 11-2(b) of Directive 2007/2/EC. In the draft Version 3, this was implemented through a codelist base on the taxonomy of services developed in EN ISO 19119. This implementation was revised as follows (key issue 3 above):
 - (1) a new metadata element Spatial Data Service Type was introduced to allow a more immediate classification of the network services identified in Article 11-1(a to e) of Directive 2007/2/EC with an additional value "Other" to identify those spatial data services that are not Network Services.
 - (2) it mandates the use of at least one keyword from the taxonomy of services of EN ISO 19119. The implementation through keywords rather than a codelist avoids the need for an extension of EN ISO 19119.

- The outcome of the study on temporal metadata across multiple communities (geographic, geological, meteorological) was published on the INSPIRE web site in January 2008⁴. The study confirmed that for most communities the temporal elements defined in the proposed IRs, and the use of ISO 8601 to express points in time, reflect current practice. Some communities like Geology maybe better served by using standard controlled vocabularies like Geological Time Scale 2004 developed by the International Commission on Stratigraphy. For other communities that deal with spatial resources which are continuously updated, expressing some elements of Temporal Reference as specific dates may not be accurate, and they may need to explain the situation either in keywords or in the resource abstract. Since current metadata practice has not agreed a general solution to this problem, and the temporal metadata study confirmed that there may be a need to determine on a case-by-case basis how to map the temporal information used by specific communities to a standard timeline, it is appropriate that such matters are considered by the working groups that will address the interoperability of spatial datasets and services for the relevant themes in Annexes II and III (key issue 4 above).
- The proposed IRs define the metadata elements needed to comply with the requirements of Directive 2007/2/EC. It does not mandate the use of a particular metadata standard in recognition that different communities have different practices. Nevertheless, given the widespread use of EN ISO 19115, and ISO 15836 for documenting data sets and EN ISO 19119 for services, detailed non-binding guidelines have been prepared by the Drafting Team so that it is possible to implement the proposed IRs in compliance with these standards. The guidelines are currently being edited to provide correct reference to the text of the proposed IRs. The Commission is also exploring ways to give to these guidelines a high visibility, and mechanisms for their maintenance including discussion with relevant international standardization bodies (Key issue 5 above).
- Editorial comments are addressed in the proposed IRs including the use of a character strings code and namespace instead of free text (key issue 6 above).

The Commission's proposal for INSPIRE metadata IRs has been submitted to the Regulatory Committee on 2008-04-18; the European Parliament has been informed according to the regulatory procedure. The Regulatory Committee has met on 2008-05-14 and expressed its unanimously favourable opinion. The proposal is currently subject to comments from the European Parliament and formal adoption procedure. The process for the adoption of the Implementing Rules is detailed in Section 3 of the Work Programme 2007-09⁵.

⁴ <http://www.ec-gis.org/inspire/reports/TemporalMetadataforDiscovery>

⁵ http://inspire.jrc.it/reports/transposition/INSPIRE_IR_WP2007_2009_en.pdf