

UK GEMINI Standard

A UK Metadata Standard for discovery of geographic data
resources

Version 2.1

2007-10-15

This version is a draft revision of the Standard, published for information and comment. Any comments should be sent to standards@agi.org.uk It will be finalised following publication of the INSPIRE Implementing Rules for Metadata.

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Update history

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Foreword

UK GEMINI was originally produced in 2004 by collaboration between the Association for Geographic Information (AGI), the (then) e-Government Unit (eGU) and the UK Data Archive. It was designed for use in the UK geospatial metadata service *gigateway* to replace the NGDF (National Geo-spatial Data Framework) metadata standard¹ with metadata that is compatible with ISO 19115.

In 2006, a Working Group was set up under the auspices of The Association for Geographic Information (AGI) to revise the Standard. It contained representatives from the following organisations:

- AGI
- British Geological Survey
- Cabinet Office
- EDINA
- Environment Agency
- *gigateway*
- Natural England
- UK Hydrographic Office

The principles of the revision are as follows:

1. to meet the requirements for metadata of the EU INSPIRE Directive;
2. to maintain conformance to the International Standard ISO 19115 Geographic information – Metadata;
3. to be consistent with the GEMINI1.0 where possible;
4. to be compatible with the e-Government Metadata Standard where possible;
5. to correct errors in GEMINI 1.0 and take into account experience of its use.

The main changes made are as follows:

- removal of some elements that are considered to be not necessary;
- addition of elements to conform to ISO 19115 mandatory core set and the INSPIRE Metadata Implementing Rules;
- minor updates and corrections;
- other changes in detail essentially to provide clarification of the requirements.

A set of guidelines for metadata for geospatial datasets was produced in 2006². The Guidelines are in three parts:

¹ See <http://www.gigateway.org.uk/metadata/standards.htm>

² These Guidelines can be found at www.gigateway.org.uk

- Part 1 Introduction to Metadata
- Part 2 Creating metadata using UK GEMINI
- Part 3 Metadata quality

These Guidelines are intended for general use in the UK geographic information environment, and particularly in support of the national geospatial metadata service, *gigateway*. They were developed within the context of a national geospatial metadata service (currently *gigateway*), and the UK GEMINI metadata standard. These Guidelines have been updated to incorporate the changes made in the revised version of UK GEMINI.

Any feedback on this Standard should be sent to standards@agi.org.uk

Introduction

Geospatial data is data containing a positional element relative to the Earth. Many datasets that at first sight do not appear to be geospatial nevertheless do have a geospatial component, in that they apply to a limited geographic area, for example statistics for a local authority area. Geospatial data contains spatial references which may take the form of coordinates, for example in latitude and longitude, or references to geographic place names, for example street data.

Metadata is data about data. It provides additional information about the data resource, to enable it to be better understood and used to good effect. There are a range of uses for metadata:

- **discovery**: the user aims to find out what available resources are potentially able to satisfy a specified set of requirements.
- **evaluation**: the user needs to go deeper in the metadata (e.g., looking at the quality information) in order to ascertain whether a candidate resource fits for the intended purpose.
- **use**: the user has selected a candidate resource, but needs to access it and to configure a system or software to process it.

There are many metadata standards in existence. These have been produced at different times by different bodies for different purposes. The main ones that are relevant to geospatial datasets are:

- **e-GMS**, the UK e-government metadata standard, which forms part of the e-government Interoperability Framework (eGIF)³ and is mandated for use in the UK public sector.
- **ISO 19115**, the International Standard which describes all aspects of geospatial metadata and provides a comprehensive set of metadata elements that are widely used as the basis for metadata services.

The EU INSPIRE Directive mandates the collection of metadata for use in Europe. Implementing Rules will define the requirements for metadata for discovery purposes. These will be based upon ISO 19115.

The purpose of UK GEMINI is to provide a core set of metadata elements for use in a UK geospatial metadata service, that are compatible with the INSPIRE requirements for metadata. It does not preclude organisations recording additional metadata elements for their own internal business purposes.

In this document the term 'data resource' is used, in preference to 'dataset'. This is to allow UK GEMINI to be applied to resources in addition to datasets, such as services supplying data.

³ See <http://www.govtalk.gov.uk/schemasstandards/datastandards.asp>

1. Scope

This Standard specifies a set of metadata elements for describing geographic information resources. These resources may be datasets, dataset series, services delivering geographic data, or any other information with a geospatial dimension. They include all datasets that have a geospatial component, in that they apply to a limited geographic area.⁴ The resources may be graphical or textual (tabular or free text), hardcopy or digital.

The metadata elements are intended for use in a metadata service for discovering what resources exist. The elements include the mandatory core set defined in ISO 19115 Geographic information – Metadata, and comply with the INSPIRE Implementing Rules for Metadata⁵. Where possible, they also conform to the UK e-government metadata standard (e-GMS). In any implementation or community, it is likely that additional metadata elements will be included for other purposes, such as data management.

Although it is primarily designed for data resources within the UK, by following the principles and structures of ISO 19115, this Standard is applicable in an organisation, user community or nation.

2. Normative References

ISO 639-2 Codes for the representation of the names of languages – Alpha-3 code

ISO 3166 Codes for names of countries and their subdivisions

ISO 8601 Data elements and interchange formats – Information interchange – Representation of dates and times

ISO 19115:2003 Geographic information – Metadata

ISO 19115:2003 Cor.1:2006 Geographic information – Metadata Technical corrigendum 1

ISO 19119:2005 Geographic information - Services

3. Terms and Definitions

data resource

dataset, collection of datasets or service supplying data

dataset

identifiable collection of data

dataset series

collection of datasets sharing the same product specification

Example: a 1:1250 scale map series

⁴ For a discussion of datasets within scope, see Metadata Guidelines Part 1, section 4.

⁵ Currently only at a draft stage – see <http://www.ec-gis.org/inspire/reports.cfm>

domain

set of allowable values

enumerated list

set of values, each of which is identified by a code

geographic identifier

label or code that identifies a location

metadata

data about data

metadata element

individual item of metadata relating to a data resource

metadataset

set of metadata relating to a single data resource

profile

set of one or more base standards or subsets of base standards for a particular application

4. Requirements

4.1 Metadata requirements

UK GEMINI specifies a set of metadata elements for use when describing geographic information resources. These elements are listed in Table 1, which shows the metadata element names, their GEMINI element number, the obligation (whether their inclusion is mandatory, optional or conditional, and the number of possible occurrences of the element (whether there may be many (N), or only one (1)).

For metadata to conform to this Standard, it is necessary that all mandatory elements are provided. Optional elements should be provided where they are applicable. A checklist for conformity is given in Annex A.

Table 1. Metadata elements

Element number	Element name	Obligation	Number of occurrences
1	Title	M	1
2	Alternative title	O	N
3	Dataset language	M	N
4	Abstract	M	1
5	Topic category	M	N
6	Keyword	M	N
7	Date	M	1
8	Dataset reference date	M	1
9	Originator	O	N
10	Lineage	O	1
11	West bounding longitude	M	1
12	East bounding longitude	M	1
13	North bounding latitude	M	1
14	South bounding latitude	M	1
15	Extent	M	N
16	Vertical extent information	C	1
17	Spatial reference system	M	1
18	Spatial resolution	O	1
21	Data format	M	N
23	Distributor	M	N
24	Frequency of update	M	1
25	Access constraint	O	N
26	Use constraints	O	N
27	Additional information source	O	1
30	Date of update of metadata	M	N
31	Metadata standard name*	O	1
32	Metadata standard version*	O	1
33	Metadata language*	O	1
34	Metadata character set*	C	1
35	Metadata point of contact	M	N
36	Dataset character set*	C	N
37	Service type [°]	C	1
38	Service type version [°]	O	N
39	Operation name [°]	C	N
40	Distributed computing platform [°]	C	N
41	Conformity*	O	N

Note. Element numbers 19, 20, 22, 28 and 29 have been omitted because they were used to identify elements that have now been deleted from the Standard, and have not been reallocated to avoid confusion.

* indicates metadata on metadata (see 4.2)

[°] indicates metadata for services (see 7)

4.2 Metadata on metadata

Some metadata elements concern the metadata rather than the data resource itself. These are termed 'metadata on metadata'. These elements are likely to have common values for all metadata records in a metadataset, and may be provided collectively, rather than being repeated with each individual metadata record.

4.3 Element details

Details of the metadata elements are given in Clauses 5, 6 and 7. Each element is the subject of a separate table. The tables contain the following:

- Metadata element number – the identifier of the UK GEMINI element;
- Metadata element name – the name of the UK GEMINI element;
- Definition – the formal definition of the element;
- Equivalent INSPIRE element – the name of the element in the INSPIRE Metadata Implementing Rules that corresponds to the element (Note that these are subject to confirmation, as the INSPIRE Implementing Rules are not yet finalised);
- Comparison with INSPIRE element – how the element relates to the INSPIRE element;
- Equivalent ISO 19115 element number – the reference number of the equivalent metadata element;
- Equivalent ISO 19115 element name – the name of the equivalent metadata element;
- Comparison with ISO 19115 element – how the element relates to the ISO 19115 element;
- Equivalent e-GMS element – the name of the equivalent metadata element;
- Comparison with e-GMS element – how the element relates to the e-GMS element;
- Obligation – whether the element is mandatory, optional or conditional (where the element must be supplied when certain conditions apply);
- Occurrence – whether the element is single-valued or can have multiple values;
- Data type – the form of the entry, whether it is a character string, real number, integer, code or other class⁶;
- Domain – the allowable set of values;
- Change from GEMINI v1.0 – how the element has changed from v1.0 of the Standard;
- General rules implementation – any high-level explanation⁷;
- Comment – other comments about the element.

⁶ Where the data type is another class, it is implemented as an additional set of elements. Examples are Distributor and Vertical extent.

⁷ For detailed guidance on how to create the metadata, see Metadata Guidelines for Geo-spatial Datasets, Part 2.

5. Metadata elements

5.1 Title

Metadata element number	1
Metadata element name	Title
Definition	name given to the data resource
Equivalent INSPIRE element	Resource title
Comparison with INSPIRE element	identical
Equivalent ISO 19115 element number	360
Equivalent ISO 19115 element name	MD_DataIdentification.citation>CI_Citation.title
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	Title
Comparison with e-GMS element	equivalent
Obligation	mandatory
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	name should be readily recognisable and unique.
Comment	-

5.2 Alternative Title

Metadata element number	2
Metadata element name	Alternative title
Definition	short name, other name, acronym or alternative language title for the data resource
Equivalent INSPIRE element	none
Comparison with INSPIRE element	INSPIRE only has a single title
Equivalent ISO 19115 element number	361
Equivalent ISO 19115 element name	MD_Identification>CICitation.alternativeTitle
Comparison with ISO 19115 element	equivalent – slight change to name
Equivalent e-GMS element	Title, alternative
Comparison with e-GMS element	refinement of Title
Obligation	optional
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	should be provided when the resource has more than one title
Comment	-

5.3 Dataset language

Metadata element number	3										
Metadata element name	Dataset language										
Definition	language used in the data resource										
Equivalent INSPIRE element	Resource language										
Comparison with INSPIRE element	element is optional in INSPIRE										
Equivalent ISO 19115 element number	39										
Equivalent ISO 19115 element name	MD_DataIdentification.language										
Comparison with ISO 19115 element	identical										
Equivalent e-GMS element	Language										
Comparison with e-GMS element	equivalent										
Obligation	mandatory										
Occurrence	multiple										
Data type	character string										
Domain	free text										
Change from GEMINI v1.0	none										
General rules for implementation	<p>It is recommended to select a value from a controlled vocabulary, for example that provided by ISO 639-2 which uses three-letter primary tags with optional subtags. The commonly used values for the UK are:</p> <table> <tr> <td>English</td> <td>eng</td> </tr> <tr> <td>Welsh</td> <td>cym</td> </tr> <tr> <td>Gaelic (Irish)</td> <td>gle</td> </tr> <tr> <td>Gaelic (Scottish)</td> <td>gla</td> </tr> <tr> <td>Cornish</td> <td>cor</td> </tr> </table> <p>In many cases, a default value of 'eng' can be applied.</p>	English	eng	Welsh	cym	Gaelic (Irish)	gle	Gaelic (Scottish)	gla	Cornish	cor
English	eng										
Welsh	cym										
Gaelic (Irish)	gle										
Gaelic (Scottish)	gla										
Cornish	cor										
Comment	ISO 639-2 also allows 'wel' for Welsh, but two values for the same language causes confusion.										

5.4 Abstract

Metadata element number	4
Metadata element name	Abstract
Definition	brief narrative summary of the data resource
Equivalent INSPIRE element	Abstract
Comparison with INSPIRE element	identical
Equivalent ISO 19115 element number	25
Equivalent ISO 19115 element name	MD_Identification.abstract
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	Description
Comparison with e-GMS element	equivalent
Obligation	mandatory
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	The abstract should provide a clear statement of the content of the dataset, and not general background information.
Comment	-

5.5 Topic Category

Metadata element number	5
Metadata element name	Topic category
Definition	main theme(s) of the data resource
Equivalent INSPIRE element	Resource topic category
Comparison with INSPIRE element	Optional in INSPIRE
Equivalent ISO 19115 element number	41
Equivalent ISO 19115 element name	MD_DataIdentification.topicCategory
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	Subject
Comparison with e-GMS element	similar, but e-GMS allows a wider range of values.
Obligation	mandatory
Occurrence	multiple
Data type	class
Domain	code list MD_TopicCategoryCode taken from ISO 19115 (see below)
Change from GEMINI v1.0	none
General rules for implementation	select one or more categories that most closely represent the topic of the data resource
Comment	For greater detail within a topic, use the element 'Keyword'.

MD_TopicCategory

Name	Domain code	Definition
farming	001	rearing of animals and/or cultivation of plants Examples: agriculture, plantations, herding, pests and diseases affecting crops and livestock
biota	002	flora and/or fauna in natural environment Examples: wildlife, vegetation, biological sciences, ecology, sea-life, habitat
boundaries	003	legal land descriptions Examples: political and administrative boundaries
climatology/meteorology/atmosphere	004	processes and phenomena of the atmosphere Examples: weather, climate, atmospheric conditions
economy	005	economic activities, conditions and employment Examples: production, labour, revenue, commerce, industry
elevation	006	height above or below sea level Examples: altitude, bathymetry, digital elevation models, slope
environment	007	environmental resources, protection and conservation Examples: environmental pollution, waste storage and treatment, environmental impact assessment, monitoring environmental risk, nature reserves, landscape
geoscientific information	008	information pertaining to earth sciences Examples: geophysical features and processes, geology, minerals, soils
health	009	health, health services, human ecology, and safety Examples: disease and illness, factors affecting health, health services
imagery/basemaps/earth cover	010	base maps Examples: land cover, topographic maps, imagery, unclassified images
military intelligence	011	military bases, structures, activities Examples: barracks, training grounds, military transportation
inland waters	012	inland water features, drainage systems and their characteristics Examples: rivers, salt lakes, dams, floods, water quality, hydrographic charts
location	013	positional information and services Examples: addresses, geodetic networks, control points, postal zones and services, place names
oceans	014	features and characteristics of salt water bodies (excluding inland waters) Examples: tides, tidal waves, coastal information, reefs
planning/cadastre	015	information used for appropriate actions for future use of the land Examples: land use maps, zoning maps, cadastral surveys, land ownership

Name	Domain code	Definition
society	016	characteristics of society and cultures Examples: settlements, anthropology, archaeology, education, demographic data, recreational areas and activities, social impact assessments, crime and justice, census information
structure	017	man-made construction Examples: buildings, museums, churches, factories, housing, monuments, shops
transportation	018	means and aids for conveying persons and/or goods Examples: roads, airports/airstrips, shipping routes, tunnels, nautical charts, vehicle or vessel location, aeronautical charts, railways
utilities/communication	019	energy, water and waste systems and communications infrastructure and services Examples: sources of energy, water purification and distribution, sewage collection and disposal, electricity and gas distribution, data communication, telecommunication, radio

5.6 Keyword

Metadata element number	6
Metadata element name	Keyword
Definition	topic of the content of the data resource
Equivalent INSPIRE element	Keyword
Comparison with INSPIRE element	equivalent
Equivalent ISO 19115 element number	53
Equivalent ISO 19115 element name	MD_Identification>MD_Keywords.keyword
Comparison with ISO 19115 element	equivalent
Equivalent e-GMS element	Subject
Comparison with e-GMS element	equivalent
Obligation	mandatory
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	change of name
General rules for implementation	Values should be taken from a list of standards subject categories. One such list is the Integrated Public Sector Vocabulary (IPSV) from the esd-toolkit, at www.esd.org.uk/standards/ipsv/ which should be used by public sector bodies.
Comment	This element is similar to Topic Category, but allows a broader range of values

5.7 Date

Metadata element number	7
Metadata element name	Date
Definition	date and time for the content of the data resource
Equivalent INSPIRE element	Temporal reference
Comparison with INSPIRE element	INSPIRE Temporal reference may be date of publication (UK GEMINI Dataset reference date), last revision, or creation (UK GEMINI Date)
Equivalent ISO 19115 element number	351
Equivalent ISO 19115 element name	EX_TemporalExtent.extent
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	Coverage, temporal
Comparison with e-GMS element	temporal refinement of Coverage
Obligation	mandatory
Occurrence	single
Data type	date
Domain	Date, or two dates defining the duration of the period, as defined by BS ISO 8601.
Change from GEMINI v1.0	none
General rules for implementation	Dates may be to any degree of precision, from century (YY) to full date and time. The extended date format (YYYY-MM-DD) should be used, where YYYY is the year, MM the month and DD the day. Time (-HH:MM:SS, where HH is the hour, MM the minute and SS the second) may be added if required. Periods are recorded as {fromdate/todate} (e.g. 2006-04-01/2007-03-31). Either fromdate or todate (but not both) may be left blank to indicate uncertainty.
Comment	-

5.8 Dataset reference date

Metadata element number	8
Metadata element name	Dataset reference date
Definition	reference date for the data resource
Equivalent INSPIRE element	Temporal reference
Comparison with INSPIRE element	INSPIRE Temporal reference may be date of publication (UK GEMINI Dataset reference date), last revision, or creation (UK GEMINI Date)
Equivalent ISO 19115 element number	362
Equivalent ISO 19115 element name	MD_Identification.citation>CI_Citation.date
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	Date
Comparison with e-GMS element	equivalent
Obligation	mandatory
Occurrence	single
Data type	Date
Domain	date as defined by BS ISO 8601
Change from GEMINI v1.0	none
General rules for implementation	Dates may be to any degree of precision, from century (YY) to full date and time. The extended date format (YYYY-MM-DD) defined in BS ISO 8601 should be used, where YYYY is the year, MM the month and DD the day. It may be extended to include time (-HH:MM:SS, where HH is the hour, MM the minute and SS the second).
Comment	Dataset reference date is an identifying date for the data resource. It is a notional date of "publication" of the resource. It is different from Date which is the actual date of the currency of the data. For example, an atlas might have the reference date '2007', but the data will have been collected over a period prior to this.

5.9 Originator

Metadata element number	9
Metadata element name	Originator
Definition	person or individual having primary responsibility for the intellectual content of the data resource
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	29
Equivalent ISO 19115 element name	MD_Identification.pointOfContact
Comparison with ISO 19115 element	pointOfContact allows details for a range of roles. Organisation name should be given with role = 7 (originator)
Equivalent e-GMS element	Creator
Comparison with e-GMS element	equivalent
Obligation	optional
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	should be provided if known
Comment	Note that the Originator may be different from the Distributor

5.10 Lineage

Metadata element number	10
Metadata element name	Lineage
Definition	information about the events or source data used in the construction of the data resource
Equivalent INSPIRE element	Lineage
Comparison with INSPIRE element	identical
Equivalent ISO 19115 element number	83
Equivalent ISO 19115 element name	DQ_DataQuality.lineage>LI_Lineage.statement
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	optional
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	<p>Some information should be provided. Include statements on the following:</p> <ul style="list-style-type: none"> • source material • processes used to create the data, including resolution of measurement • method of updating • any quality control processes
Comment	<p>This element is similar to Abstract, and some information may be included in either element. Further details included in an external file may be referenced under 'Additional information source'.</p>

5.11 West bounding longitude

Metadata element number	11
Metadata element name	West bounding longitude
Definition	western-most limit of the data extent, expressed in longitude in decimal degrees (positive east)
Equivalent INSPIRE element	part of Geographic extent of the resource
Comparison with INSPIRE element	Geographic extent of the resource also includes other bounding latitude and longitude
Equivalent ISO 19115 element number	344
Equivalent ISO 19115 element name	MD_DataIdentification.extent> EX_GeographicExtent>EX_Extent> EX_GeographicBoundingBox.westBoundLongitude
Comparison with ISO 19115 element	slight change of name
Equivalent e-GMS element	Coverage, spatial
Comparison with e-GMS element	Spatial refinement of Coverage, including all aspects of spatial location
Obligation	mandatory
Occurrence	single
Data type	real
Domain	- 180.0 <= value <= 180.0
Change from GEMINI v1.0	slight change of name
General rules for implementation	Only approximate values are required, sufficient to identify the extent on a global basis, e.g. to a tenth of a degree.
Comment	The West bounding coordinate usually has a value less than the value of the East bounding coordinate, except when the extent straddles the 180 degree meridian.

5.12 East bounding longitude

Metadata element number	12
Metadata element name	East bounding longitude
Definition	eastern-most limit of the data's extent, expressed in longitude in decimal degrees (positive east)
Equivalent INSPIRE element	part of Geographic extent of the resource
Comparison with INSPIRE element	Geographic extent of the resource also includes other bounding latitude and longitude
Equivalent ISO 19115 element number	345
Equivalent ISO 19115 element name	MD_DataIdentification.extent> EX_GeographicExtent>EX_Extent> EX_GeographicBoundingBox.eastBoundLongitude
Comparison with ISO 19115 element	slight change of name
Equivalent e-GMS element	Coverage, spatial
Comparison with e-GMS element	Spatial refinement of Coverage, including all aspects of spatial location
Obligation	mandatory
Occurrence	single
Data type	real
Domain	- 180.0 <= value <= 180.0
Change from GEMINI v1.0	slight change of name
General rules for implementation	Only approximate values are required, sufficient to identify the extent on a global basis, e.g. to a tenth of a degree.
Comment	The East bounding longitude usually has a value greater than the value of the West bounding longitude, except when the extent straddles the 180 degree meridian.

5.13 North bounding latitude

Metadata element number	13
Metadata element name	North bounding latitude
Definition	northern-most limit of the data extent, expressed in latitude in decimal degrees (positive north)
Equivalent INSPIRE element	part of Geographic extent of the resource
Comparison with INSPIRE element	Geographic extent of the resource also includes other bounding latitude and longitude
Equivalent ISO 19115 element number	347
Equivalent ISO 19115 element name	MD_DataIdentification.extent> EX_GeographicExtent>EX_Extent> EX_GeographicBoundingBox.northBoundLatitude
Comparison with ISO 19115 element	slight change of name
Equivalent e-GMS element	Coverage, spatial
Comparison with e-GMS element	Spatial refinement of Coverage, including all aspects of spatial location
Obligation	mandatory
Occurrence	single
Data type	real
Domain	- 90.0 <= value <= 90.0
Change from GEMINI v1.0	slight change of name
General rules for implementation	Only approximate values are required, sufficient to identify the extent on a global basis, e.g. to a tenth of a degree.
Comment	The North bounding latitude must have a value greater than the value of the South bounding latitude.

5.14 South bounding latitude

Metadata element number	14
Metadata element name	South bounding latitude
Definition	southern-most limit of the data extent, expressed in latitude in decimal degrees (positive north)
Equivalent INSPIRE element	part of Geographic extent of the resource
Comparison with INSPIRE element	Geographic extent of the resource also includes other bounding latitude and longitude
Equivalent ISO 19115 element number	346
Equivalent ISO 19115 element name	MD_DataIdentification.extent> EX_GeographicExtent>EX_Extent> EX_GeographicBoundingBox.southBoundLatitude
Comparison with ISO 19115 element	slight change of name
Equivalent e-GMS element	Coverage, spatial
Comparison with e-GMS element	Spatial refinement of Coverage, including all aspects of spatial location
Obligation	mandatory
Occurrence	single
Data type	real
Domain	- 90.0 <= value <= 90.0
Change from GEMINI v1.0	slight change of name
General rules for implementation	Only approximate values are required, sufficient to identify the extent on a global basis, e.g. to a tenth of a degree.
Comment	The South bounding latitude must have a value less than the value of the North bounding latitude.

5.15 Extent

Metadata element number	15														
Metadata element name	Extent														
Definition	extent of data resource by country or subdivision of country														
Equivalent INSPIRE element	Geographic extent of the resource														
Comparison with INSPIRE element	equivalent														
Equivalent ISO 19115 element number	349														
Equivalent ISO 19115 element name	EX_GeographicDescription.geographicIdentifier >MD_Identifier.code														
Comparison with ISO 19115 element	identical														
Equivalent e-GMS element	Coverage, spatial														
Comparison with e-GMS element	Spatial refinement of Coverage, including all aspects of spatial location														
Obligation	mandatory														
Occurrence	multiple														
Data type	enumerated class														
Domain	<p>Code list as defined in ISO 3166. Codes for higher level areas in the United Kingdom (code GB) are as follows:</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Area</th> </tr> </thead> <tbody> <tr> <td>CHA</td> <td>Channel Islands</td> </tr> <tr> <td>ENG</td> <td>England</td> </tr> <tr> <td>IOM</td> <td>Isle of Man</td> </tr> <tr> <td>NIR</td> <td>Northern Ireland</td> </tr> <tr> <td>SCT</td> <td>Scotland</td> </tr> <tr> <td>WLS</td> <td>Wales</td> </tr> </tbody> </table>	Code	Area	CHA	Channel Islands	ENG	England	IOM	Isle of Man	NIR	Northern Ireland	SCT	Scotland	WLS	Wales
Code	Area														
CHA	Channel Islands														
ENG	England														
IOM	Isle of Man														
NIR	Northern Ireland														
SCT	Scotland														
WLS	Wales														
Change from GEMINI v1.0	none														
General rules for implementation	An area approximating to the extent of coverage of the data resource should be chosen. Where the extent of the dataset does not coincide with any defined area or areas,														

	then either the nearest equivalent including the area of coverage, or a set of multiple areas that make up the coverage should be provided.
Comment	For further details see the Guidelines.

5.16 Vertical extent information

Metadata element number	16
Metadata element name	Vertical extent information
Definition	vertical domain of the data resource
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	354
Equivalent ISO 19115 element name	MD_Metadata>MD_DataIdentification.extent >EX_Extent>EX_VerticalExtent
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	conditional/include if vertical coordinates are contained in the data resource
Occurrence	single
Data type	Class
Domain	EX_VerticalExtent This class comprises the elements: <ul style="list-style-type: none"> 1. minimum value 2. maximum value 3. coordinate reference system For details see below
Change from GEMINI v1.0	occurrence changed from multiple to single; description of class EX_VerticalExtent changed to match change to ISO 19115 ⁸
General rules for implementation	This element should be used only where vertical extent is significant, e.g. in geology, mining, meteorology etc.
Comment	-

⁸ See ISO 19115:2003Cor.1:2006 Geographic information – Metadata Technical corrigendum 1

EX_VerticalExtent

Metadata element name	Definition	Obligation	Occurrence	Data type	Domain	Other comments
minimum value	lowest vertical extent contained in the dataset	mandatory	single	real	real number	positive measured upwards
maximum value	highest vertical extent contained in the dataset	mandatory	single	real	real number	positive measured upwards
coordinate reference system	vertical coordinate reference system to which the maximum and minimum values are measured	mandatory	single	character string	free text	See for example coordinate referencing systems provided by the OGP Surveying and Positioning Committee (see www.epsg.org)

5.17 Spatial reference system

Metadata element number	17
Metadata element name	Spatial reference system
Definition	Name or description of the system of spatial referencing, whether by coordinates or geographic identifiers, used in the data resource
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	207
Equivalent ISO 19115 element name	MD_ReferenceSystem.referenceSystemIdentifier >MD_Identifier.code
Comparison with ISO 19115 element	Equivalent – 19115 has a class comprising code list, identifier and code
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	mandatory
Occurrence	single
Data type	integer
Domain	code
Change from GEMINI v1.0	changed from enumerated list
General rules for implementation	A recommended code list is given below. Codes for other spatial referencing systems are provided by the OGP Surveying and Positioning Committee (see www.epsg.org).

	<table border="1"> <thead> <tr> <th>Domain code</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>001</td> <td>National Grid of Great Britain</td> </tr> <tr> <td>002</td> <td>Irish Grid</td> </tr> <tr> <td>003</td> <td>Irish Transverse Mercator</td> </tr> <tr> <td>004</td> <td>WGS84</td> </tr> <tr> <td>011</td> <td>postcode</td> </tr> <tr> <td>012</td> <td>parish</td> </tr> <tr> <td>013</td> <td>ward</td> </tr> <tr> <td>014</td> <td>electoral constituency</td> </tr> <tr> <td>015</td> <td>census area</td> </tr> <tr> <td>016</td> <td>local authority (county/unitary/district/borough)</td> </tr> <tr> <td>017</td> <td>region</td> </tr> <tr> <td>018</td> <td>country</td> </tr> <tr> <td>019</td> <td>Health Authority area</td> </tr> <tr> <td>020</td> <td>travel-to-work area</td> </tr> <tr> <td>021</td> <td>other area type</td> </tr> </tbody> </table>	Domain code	Definition	001	National Grid of Great Britain	002	Irish Grid	003	Irish Transverse Mercator	004	WGS84	011	postcode	012	parish	013	ward	014	electoral constituency	015	census area	016	local authority (county/unitary/district/borough)	017	region	018	country	019	Health Authority area	020	travel-to-work area	021	other area type
	Domain code	Definition																															
	001	National Grid of Great Britain																															
	002	Irish Grid																															
	003	Irish Transverse Mercator																															
	004	WGS84																															
	011	postcode																															
	012	parish																															
	013	ward																															
	014	electoral constituency																															
	015	census area																															
	016	local authority (county/unitary/district/borough)																															
	017	region																															
	018	country																															
	019	Health Authority area																															
	020	travel-to-work area																															
	021	other area type																															
	Comment	The code list may need to be extended to cover additional spatial referencing systems, or for street name or property address.																															

5.18 Spatial resolution

Metadata element number	18
Metadata element name	Spatial resolution
Definition	measure of the granularity of the data (in metres)
Equivalent INSPIRE element	Spatial resolution
Comparison with INSPIRE element	equivalent
Equivalent ISO 19115 element number	61
Equivalent ISO 19115 element name	MD_DataIdentification.spatialresolution >spatialresolution.distance
Comparison with ISO 19115 element	equivalent
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	optional
Occurrence	single
Data type	real
Domain	real > 0
Change from GEMINI v1.0	none
General rules for implementation	<p>This should be provided if known.</p> <ol style="list-style-type: none"> 1. For data capture in the field, it is the precision at which the data is captured. This may be the accuracy for topographic surveys, or the average sampling distance in an environmental survey. 2. For data taken from maps, it is the positional accuracy of the map. 3. For image data, it is the resolution of the image.
Comment	This should not be confused with precision which refers to the resolution of the measurements themselves.

5.19 Data format

Metadata element number	21
Metadata element name	Data format
Definition	format in which the digital data can be provided
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	285
Equivalent ISO 19115 element name	MD_Distribution>MD_Format.name
Comparison with ISO 19115 element	ISO 19115 has this element single valued
Equivalent e-GMS element	Format
Comparison with e-GMS element	e-GMS Format includes medium, and size
Obligation	mandatory
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	<ol style="list-style-type: none"> 1. Entries should be recognised formats for data transfer, either standard or proprietary. 2. Recommended best practice is to select a value from a controlled vocabulary, for example PRONOM⁹. 3. If the data is not transferable (e.g. is view only), then this should be stated.
Comment	-

⁹ See <http://www.nationalarchives.gov.uk/pronom>

5.20 Distributor

Metadata element number	23
Metadata element name	Distributor
Definition	details of the organisation(s) from whom the data resource can be obtained
Equivalent INSPIRE element	part of Resource responsible party
Comparison with INSPIRE element	Resource responsible party includes the roles of establishment, management, maintenance and distribution
Equivalent ISO 19115 element number	280
Equivalent ISO 19115 element name	MD_Distribution >MD_Distributor.distributorContact
Comparison with ISO 19115 element	similar high-level class
Equivalent e-GMS element	Publisher
Comparison with e-GMS element	equivalent
Obligation	mandatory
Occurrence	multiple
Data type	Class
Domain	<p>This class comprises seven elements relating to the distributor:</p> <ol style="list-style-type: none"> 1. contact position 2. organisation name 3. full postal address 4. telephone number 5. facsimile number 6. email address 7. web address <p>These are defined below.</p>
Change from GEMINI v1.0	correction of minor errors in class details
General rules for implementation	The first two elements are mandatory. Other entries should only be given that are relevant and known. Where there are several distributors, a separate entry should be given for each.
Comment	-

Metadata element name	Definition	Obligation	Occurrence	Data type	Domain	Rules for how to fill in the entry
contact position	role or position of the responsible person	optional	single	character string	free text	A general job title or generic role should be identified for someone in a position of responsibility for the data resource. Do not identify an individual by name, as this is subject to change without warning and the information is impossible to keep up-to-date.
organisation name	name of organisation supplying the data resource	mandatory	single	character string	free text	The name of the organisation should be given in full, without abbreviations
postal address	postal address of the organisation	optional	single	character string	free text	The full formal postal address (as defined for example by Royal Mail) should be given, including the postcode.
telephone number	telephone number by which individuals can talk to the organisation or individual	optional	single	character string	free text	The full telephone number should be given.
facsimile number	telephone number by which individuals can communicate with the organisation or individual by facsimile	optional	single	character string	free text	The full telephone number should be given.
email address	internet email address which individuals can use to contact the organisation or individual	optional	single	character string	free text	A valid email address should be given.
web address	distributing organisation's World Wide Web address	optional	single	character string	free text	A valid World Wide Web address should be given.

5.21 Frequency of update

Metadata element number	24																										
Metadata element name	Frequency of update																										
Definition	frequency with which modifications and deletions are made to the data after it is first produced																										
Equivalent INSPIRE element	none																										
Comparison with INSPIRE element	-																										
Equivalent ISO 19115 element number	143																										
Equivalent ISO 19115 element name	MD_ MaintenanceInformation .maintenanceAndUpdateFrequency																										
Comparison with ISO 19115 element	identical																										
Equivalent e-GMS element	Date, updating frequency																										
Comparison with e-GMS element	Updating frequency refinement of Date																										
Obligation	mandatory																										
Occurrence	single																										
Data type	enumerated list																										
Domain	<table border="1"> <thead> <tr> <th>Name</th> <th>Domain code</th> </tr> </thead> <tbody> <tr> <td>continual</td> <td>001</td> </tr> <tr> <td>daily</td> <td>002</td> </tr> <tr> <td>weekly</td> <td>003</td> </tr> <tr> <td>fortnightly</td> <td>004</td> </tr> <tr> <td>monthly</td> <td>005</td> </tr> <tr> <td>quarterly</td> <td>006</td> </tr> <tr> <td>biannually</td> <td>007</td> </tr> <tr> <td>annually</td> <td>008</td> </tr> <tr> <td>as needed</td> <td>009</td> </tr> <tr> <td>irregular</td> <td>010</td> </tr> <tr> <td>not planned</td> <td>011</td> </tr> <tr> <td>unknown</td> <td>012</td> </tr> </tbody> </table>	Name	Domain code	continual	001	daily	002	weekly	003	fortnightly	004	monthly	005	quarterly	006	biannually	007	annually	008	as needed	009	irregular	010	not planned	011	unknown	012
Name	Domain code																										
continual	001																										
daily	002																										
weekly	003																										
fortnightly	004																										
monthly	005																										
quarterly	006																										
biannually	007																										
annually	008																										
as needed	009																										
irregular	010																										
not planned	011																										
unknown	012																										
Change from GEMINI v1.0	none																										
General rules for implementation	The value should be selected from the list that most closely corresponds to the update frequency for the data resource.																										
Comment	-																										

5.22 Access constraints

Metadata element number	25												
Metadata element name	Access constraints												
Definition	restrictions and legal prerequisites for access to the data												
Equivalent INSPIRE element	Constraints												
Comparison with INSPIRE element	Constraints covers all types of constraint including security and legal												
Equivalent ISO 19115 element number	70												
Equivalent ISO 19115 element name	MD_LegalConstraints.accessConstraints												
Comparison with ISO 19115 element	identical												
Equivalent e-GMS element	Rights												
Comparison with e-GMS element	equivalent												
Obligation	optional												
Occurrence	multiple												
Data type	enumerated list												
Domain	<p>Sub-set of code list from ISO 19115 MD_RestrictionCode, without those codes applicable to Use Constraints:</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Domain code</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>licence</td> <td>005</td> <td>formal permission required for use, usually requiring payment of a fee</td> </tr> <tr> <td>restricted</td> <td>007</td> <td>withheld from general circulation or disclosure</td> </tr> <tr> <td>other restrictions</td> <td>008</td> <td>limitation not listed</td> </tr> </tbody> </table>	Name	Domain code	Definition	licence	005	formal permission required for use, usually requiring payment of a fee	restricted	007	withheld from general circulation or disclosure	other restrictions	008	limitation not listed
Name	Domain code	Definition											
licence	005	formal permission required for use, usually requiring payment of a fee											
restricted	007	withheld from general circulation or disclosure											
other restrictions	008	limitation not listed											

Change from GEMINI v1.0	Minor name change from "Access constraint" and modification of code list
General rules for implementation	Any known constraints should be identified
Comment	Access constraints are different from Use constraints which concern its suitability for particular types of usage.

5.23 Use constraints

Metadata element number	26
Metadata element name	Use constraints
Definition	restrictions and legal restraints on using the data
Equivalent INSPIRE element	Constraints
Comparison with INSPIRE element	Constraints covers all types of constraint including security and legal
Equivalent ISO 19115 element number	71
Equivalent ISO 19115 element name	MD_LegalConstraints.useConstraints
Comparison with ISO 19115 element	useConstraints has restricted code list similar to AccessConstraints
Equivalent e-GMS element	Rights
Comparison with e-GMS element	Rights also includes access constraints
Obligation	optional
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	change to free text field from enumerated list
General rules for implementation	Any known constraints should be identified
Comment	Use constraints are different from Access constraints which describe limitations on access to the data. A dataset can have open access (e.g. to look at it), but restricted use.

5.24 Additional information source

Metadata element number	27
Metadata element name	Additional information source
Definition	other descriptive information about the data resource
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	46
Equivalent ISO 19115 element name	MD_DataIdentification.supplementalInformation
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	optional
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	Any references to external information that are considered useful may be recorded. It should not be used to record additional information.
Comment	This may include a reference (e.g. a URL) to external information.

5.25 Dataset character set

Metadata element number	36
Metadata element name	Dataset character set
Definition	character coding standard used in the data resource
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	40
Equivalent ISO 19115 element name	MD_Metadata>MD_DataIdentification.characterSet
Comparison with ISO 19115 element	ISO 19115 uses a code list MD_CharacterSetCode ¹⁰
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	conditional - required where non-English characters are used
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	should be used where non-English characters are used in the data resource, e.g. to support the full Welsh language
Comment	e.g. "UTF8"

¹⁰ See ISO 19115 B.5.10

6. Metadata on metadata

6.1 Metadata standard name

Metadata element number	31
Metadata element name	Metadata standard name
Definition	name of the metadata standard (including profile name) used
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	10
Equivalent ISO 19115 element name	MD_Metadata.metadataStandardName
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	optional
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	in general, a default value will apply (e.g. "UK GEMINI")
Comment	-

6.2 Metadata standard version

Metadata element number	32
Metadata element name	Metadata standard version
Definition	version (profile) of the metadata standard used
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	11
Equivalent ISO 19115 element name	MD_Metadata.metadataStandardVersion
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	optional
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	none
General rules for implementation	in general, a default value will apply (e.g. "v2")
Comment	-

6.3 Metadata language

Metadata element number	33										
Metadata element name	Metadata language										
Definition	language used for documenting the metadata										
Equivalent INSPIRE element	Metadata language										
Comparison with INSPIRE element	identical										
Equivalent ISO 19115 element number	3										
Equivalent ISO 19115 element name	MD_Metadata.language										
Comparison with ISO 19115 element	Identical										
Equivalent e-GMS element	none										
Comparison with e-GMS element	-										
Obligation	optional										
Occurrence	single										
Data type	character string										
Domain	free text										
Change from GEMINI v1.0	new element										
General rules for implementation	<p>It is recommended to select a value from a controlled vocabulary, for example that provided by ISO 639-2 which uses three-letter primary tags with optional subtags. The commonly used values for the UK are:</p> <table> <tr> <td>English</td> <td>eng</td> </tr> <tr> <td>Welsh</td> <td>cym</td> </tr> <tr> <td>Gaelic (Irish)</td> <td>gle</td> </tr> <tr> <td>Gaelic (Scottish)</td> <td>gla</td> </tr> <tr> <td>Cornish</td> <td>cor</td> </tr> </table> <p>In general, a default value of 'eng' can be applied.</p>	English	eng	Welsh	cym	Gaelic (Irish)	gle	Gaelic (Scottish)	gla	Cornish	cor
English	eng										
Welsh	cym										
Gaelic (Irish)	gle										
Gaelic (Scottish)	gla										
Cornish	cor										
Comment	-										

6.4 Metadata character set

Metadata element number	34
Metadata element name	Metadata character set
Definition	character coding standards used for the metadata
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	4
Equivalent ISO 19115 element name	MD_Metadata.characterSet
Comparison with ISO 19115 element	ISO 19115 uses a code list MD_CharacterSetCode ¹¹
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	conditional - required where non-English characters are used
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	should only be used where non-English characters are used in the metadata, e.g. to support the full Welsh language
Comment	e.g. "UTF8"

¹¹ See ISO 19115 B.5.10

6.5 Date of update of metadata

Metadata element number	30
Metadata element name	Date of update of metadata
Definition	date on which the metadata was last updated, or was confirmed as being up-to-date changed
Equivalent INSPIRE element	Metadata date stamp
Comparison with INSPIRE element	equivalent
Equivalent ISO 19115 element number	9
Equivalent ISO 19115 element name	MD_Metadata.dateStamp
Comparison with ISO 19115 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	mandatory
Occurrence	single
Data type	Date
Domain	Single date as specified by ISO 8601 in the extended date format (YYYY-MM-DD), where YYYY is the year, MM is the month and DD is the day.
Change from GEMINI v1.0	none
General rules for implementation	-
Comment	-

6.6 Metadata point of contact

Metadata element number	35
Metadata element name	Metadata point of contact
Definition	party responsible for the metadata
Equivalent INSPIRE element	none
Comparison with INSPIRE element	-
Equivalent ISO 19115 element number	8
Equivalent ISO 19115 element name	MD_Metadata.contact>CI_ResponsibleParty
Comparison with ISO 19115 element	ISO 19115 has a general class
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	mandatory
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	Should include organisation name, position name and contact information, as described under Distributor (5.20)
Comment	-

6.7 Conformity

Metadata element number	41
Metadata element name	Conformity
Definition	information on the conformity of the data resource with the INSPIRE Implementing Rules
Equivalent INSPIRE element	Conformity
Comparison with INSPIRE element	identical
Equivalent ISO 19115 element number	none
Equivalent ISO 19115 element name	-
Comparison with ISO 19115 element	additional element for INSPIRE
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	Conditional – required if claiming conformance to INSPIRE
Occurrence	multiple
Data type	Character String
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	cannot be filled in at present
Comment	Awaiting details from INSPIRE Drafting Team on Data specifications and harmonisation

7. Services

7.1 Metadata elements

The INSPIRE Implementing Rules apply not only to datasets and datasets series, but also to (data) services. These are external applications (e.g. web services) that deliver data to a user or process, rather than complete datasets. For such services, additional metadata elements are required. These are as described in Table 2.

Table 2. Additional metadata elements for services

Element number	Element name	Obligation	Number of occurrences
37	Service type	C	1
38	Service type version	O	N
39	Operation name	C	N
40	Distributed computing platform	C	N

These elements are described in the following sub-sections. Note that services are not described in ISO 19115, but in ISO 19119 (with an associated amendment). This results in a slight inconsistency of approach regarding the way that metadata is recorded for services. Because there has been no attempt to record metadata for services, these new metadata elements are taken from the INSPIRE metadata set, which in turn follows ISO 19119.

7.2 Service type

Metadata element number	37
Metadata element name	Service type
Definition	generic name of the service type
Equivalent INSPIRE element	Service Type
Comparison with INSPIRE element	identical
Equivalent ISO 19119 element name	SV_ServiceIdentification.serviceType
Comparison with ISO 19119 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	conditional – must be supplied if the resource is a service
Occurrence	single
Data type	character string
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	entry should be taken from a registry of services
Comment	Standard code list to be provided as part of INSPIRE Network Services Implementing Rules. Examples of Service type are WMS, WFS.

7.3 Service type version

Metadata element number	38
Metadata element name	Service type version
Definition	number used to distinguish between versions of a well known service type
Equivalent INSPIRE element	Service type version
Comparison with INSPIRE element	identical
Equivalent ISO 19119 element name	SV_ServiceIdentification.serviceTypeVersion
Comparison with ISO 19119 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	optional
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	should be provided where appropriate
Comment	Example '1.1.0'

7.4 Operation name

Metadata element number	39
Metadata element name	Operation name
Definition	name of the transformation or query that is executed by the service
Equivalent INSPIRE element	Operation name
Comparison with INSPIRE element	identical
Equivalent ISO 19119 element name	SV_OperationMetadata.operationName
Comparison with ISO 19119 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	conditional – must be supplied for a service
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	mandatory for a service
Comment	Examples are 'GetCapabilities', 'GetMap', 'GetReords'

7.5 Distributed computing platform

Metadata element number	40
Metadata element name	Distributed computing platform
Definition	name of the distributed computing platform on which the service has been implemented
Equivalent INSPIRE element	Distributed computing platform
Comparison with INSPIRE element	identical
Equivalent ISO 19119 element name	SV_OperationMetadata.DCP
Comparison with ISO 19119 element	identical
Equivalent e-GMS element	none
Comparison with e-GMS element	-
Obligation	conditional – must be supplied for a service
Occurrence	multiple
Data type	character string
Domain	free text
Change from GEMINI v1.0	new element
General rules for implementation	should be provided if the resource is a service
Comment	example: 'WebServices'

8. Extended metadata

8.1 Additional metadata elements

In many organisations, there is a need to record additional items of metadata to meet specific local requirements. This may be to incorporate particular characteristics of the data resources, or for particular applications. Additional metadata elements may be included in a metadata implementation. These elements should be taken from ISO 19115¹², which includes a comprehensive collection of metadata elements for geographic information.

8.2 Extension of code lists

Several of the metadata elements specified in UK GEMINI use enumerated code lists. These are pre-defined sets of values identified by codes. They are useful to standardise the entries to aid searches of metadata for specified values. The code lists included in UK GEMINI are taken from ISO 19115. In some cases, the explanations of the values have been modified to make them more appropriate to the UK context.

Some of these code lists will require extension. Additional codes may be created as follows:

1. identify the new value, which should be distinct from existing values;
2. choose a name that encapsulates the essential concept;
3. provide a definition that is understandable and concise;
4. chose a new code that has not been used before for this element;
5. document the new codes, and disseminate them to users.

Such code extensions may be either specific to a metadata implementation in an organisation or sector, or for general usage. In the latter case, proposed new codes should be submitted¹³ for inclusion in the next version of UK GEMINI. It is expected that future editions of UK GEMINI will incorporate such modified code lists. Note that any new code values cannot be used in a national metadata service until incorporated in the Standard.

¹² ISO 19115: 2003 Geographic information – Metadata

¹³ Proposed new codes should be sent to standards@agi.org.uk

Annex A. Checklist for conformity

Metadata for a data resource shall be conformant with UK GEMINI if:

- It contains entries for all the mandatory metadata elements as defined in this Standard;
- It contains entries for all those conditional element where the condition for inclusion holds;
- Each element included in the metadata contains a valid value from the prescribed domain;
- The number of occurrences of each element does not exceed the maximum number specified;
- Each entry is in the prescribed format;
- The metadata represents the current state of the data resource.

Annex B. Major changes from v1.0

The following elements have been deleted:

- Browse graphic
- Online resource
- Presentation type
- Spatial representation type
- Supply Media

None of these were mandatory, and they are all part of the larger ISO 19115 set.

The following “metadata on metadata” elements have been added:

- Dataset character set
- Metadata language
- Metadata character set
- Conformity

These are included to “internationalise” the metadata, and will usually take default values.

The following elements have been added to cover services:

- Service type
- Service type version
- Operation name
- Distributed computing platform

Other minor changes are identified in the element tables.

References

e-Government Metadata Standard. Cabinet Office

European Union. Directive of the European Parliament and of the Council establishing an infrastructure for Spatial information in the European community (INSPIRE)

DT Metadata Draft Implementing Rules for Metadata, Rv2. 2007-02-02

Integrated Public Sector Vocabulary (IPSV) from the esd-toolkit, at www.esd.org.uk/standards/ipsv/

Metadata Guidelines for Geospatial Datasets in the UK Part 1 – Introduction. AGI 2006

Metadata Guidelines for Geospatial Datasets in the UK Part 2 – Creating metadata using UK GEMINI. AGI 2006

Metadata Guidelines for Geospatial Datasets in the UK Part 3 – Metadata quality. AGI 2006

Government Data Standards Catalogue. See <http://www.govtalk.gov.uk/schemasstandards/datastandards.asp>