



INSPIRE DT Metadata

Report of activities

20 June 2006

Marcel Reuvers (chair)

Topics

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Scope – General requirements



- IR Metadata focuses on the semantic description of the metadata elements to describe geographic data and services.
- The main purpose of metadata is to document resources and facilitate their re-use by the resource owner, and others both within and beyond the original community of interest.
- The Metadata Implementing Rule is applicable to the functional dimensions discovery, evaluation and use.
- The Metadata Implementing Rule is based on the following principles. It is in conformance with European and international standards, current practices in stakeholder communities and relevant European initiatives such as e-Government, and the EU interoperability framework. It is taking in regard the protection of investment and minimizing costs.



Scope - Directive

- The point of departure is the INSPIRE proposal as submitted by the European Commission to the European Parliament and the Council of Europe in July 2004.

Chapter II

Metadata

Article 8

1. Member States shall ensure that metadata are created for spatial data sets and services, and that those metadata are kept up to date.
2. Metadata shall include information on the following:
 - (a) the conformity of spatial data sets with the implementing rules referred to in Article 11(1);
 - (b) rights of use of spatial data sets and services;
 - (c) the quality and validity of spatial data;
 - (d) the public authorities responsible for the establishment, management, maintenance and distribution of spatial data sets and spatial data services;
 - (e) the spatial data sets to which public access is limited in accordance with Article 19 and the reasons for such limitation.
3. Member States shall take the necessary measures to ensure that metadata are complete and of high quality.

Directive – Article 18

2. For the purposes of the services referred to in point (a) of paragraph 1, as a minimum the following combination of search criteria shall be implemented:
- (a) keywords;
 - (b) classification of spatial data and services;
 - (c) spatial data quality and accuracy;
 - (d) degree of conformity with the harmonised specifications provided for in Article 11;
 - (e) geographical location;
 - (f) conditions applying to the access to and use of spatial data sets and services;
 - (g) the public authorities responsible for the establishment, management, maintenance and distribution of spatial data sets and services.

Team



Expert	Role/expertise	Country
Marcel Reuvers (chair)	Standards, link with CEN TC/287	Netherlands
Michael Gould (co-chair)	SDI implementation	Spain
Nicolas Lesage	Standards / mapping	France
Stefano Nativi	Link with GMES, grid	Italy
Gil Ross	Weather data (WMO)	United Kingdom
Kristian Senkler (co-chair)	Catalogues	Germany
Franz Daffner	Metadata implementation	EEA
David Danko	Standards	US
Jan Hjelmager	Standards / Cadastre	Denmark
Per Ryghaug	Standards / Metadata	Norway
Thomas Vögele	Expert environmental data	Germany

Organization of work - meetings

- Physical meetings:
 - 3 - 4 October kick-off
 - (8) - 9 November at OGC meeting
 - 8 November OGC meeting on INSPIRE / GMES / RISE
 - 9 November DT Metadata meeting
 - 17 January in Muenster
 - 30/31 March in Copenhagen – 1,5 day joint meeting with subwg Metadata CEN TC/287
 - 20 June in Innsbruck (before 12th EC GI&GIS)
- Telecons (11 telecons so far)
 - First December
 - Since 31 January bi-weekly

Organization of work – cross-links to projects and activities



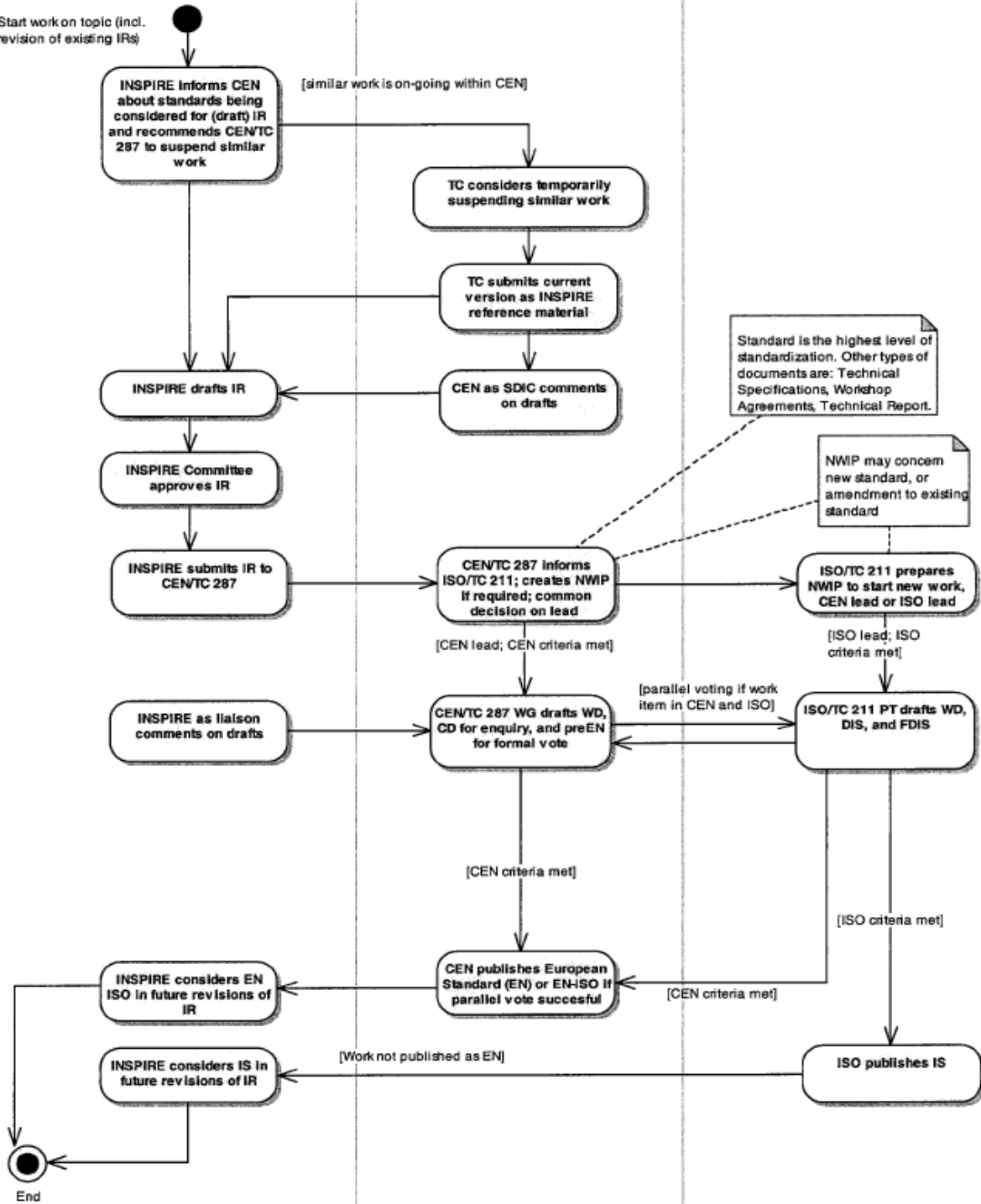
- ISO/OGC standards and projects
- CEN TC/287
- EU-geoportal
- GMES
- SDIGER
- And others (also by reference material and knowledge DT Metadata)

Organization of work – CEN TC/287



- CEN TC/287 started November 2004 with a European core profile for discovery (chair: Marcel Reuvers)
- Same concepts, same ideas
- INSPIRE DT Metadata decided January 2006 to re-use the existent material (as much as possible)
- Parallel work till 30/31 March in Copenhagen – 1,5 day joint meeting with subwg Metadata CEN TC/287
 - Harmonizing metadata elements
 - Decision to postpone the CEN TC/287 work after finishing DT Metadata work
 - Agreement on proposal CT-chairs, chair CEN TC/287, chair ISO TC/211 (next slide)

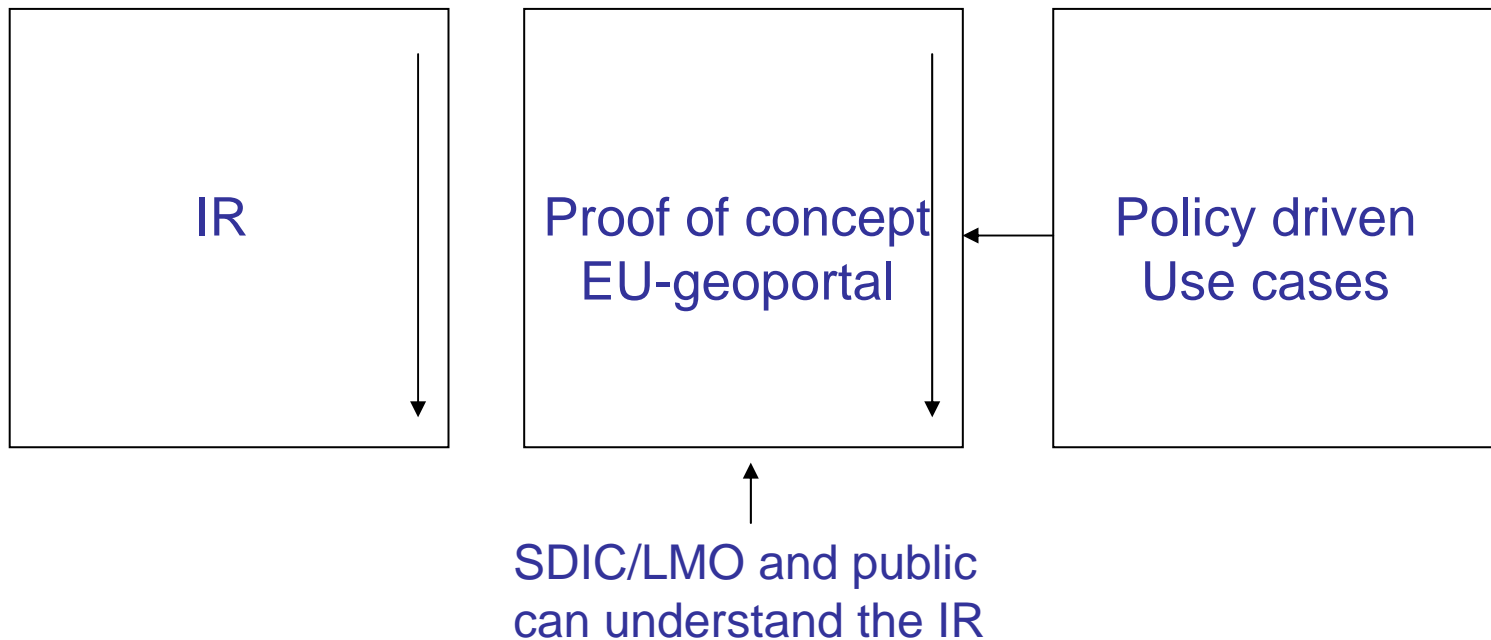
Start work on topic (incl. revision of existing IRs)



Organization of work – EU Geoportal tender (JRC)



- Started 1 February (period of 4 months)
- Advantages:
 - Making IR (metadata) visible
 - Testing IR in practice (interaction) → possible change proposal
 - Environment for other communities/projects to work with



Organization of work – Metadata survey



The objective of this initiative is to define a benchmark of the current availability of online metadata for data sets by the SDICS and LMOS (a separate survey for services will be undertaken at a later stage if needed).

This benchmark will enable to do the following:

- to identify the current awareness, availability, format, organisation and performance of metadata holdings across those communities that having registered with Inspire should be at the leading edge of the community of stakeholders at large.
- to explore the extent to which these metadata holdings can be cross searched and whether it is also possible to search across other communities such as those of the e-government
- to have the opportunity to monitor over time the implementation of the INSPIRE metadata implementing rules.

With these objectives in mind we have launched this survey among the registered SDICS and LMOS.

This information is also available at <http://inspire.jrc.it> (follow link to Metadata survey).

Deliverables (updated WP)

Deliverable	Title	Who
D 1.1	Requirements for the Definition of the INSPIRE Implementing Rules for Metadata <i>General guidelines delivered in the pre kick-off meeting documents; can be elaborated on basis of DT discussion</i>	CT
D 1.2	Defining requirements for content and structure of metadata for spatial data based on a survey of existing initiatives, reference material and solutions	DT/CT
D 1.3	Draft Implementing Rules for discovery, use and evaluation metadata and rules for extending the INSPIRE metadata set for specific spatial data themes	DT
D 1.4	Final draft Implementing Rules for discovery, use and evaluation metadata for spatial data and rules for extending the INSPIRE metadata set for specific needs of spatial data themes.	CT/DT

Deliverable 1.2

- Reference materials (~80) initially submitted (LMOs/SDICs)
- Supplemented with DT-recommended materials
- 120 documents in total (as of 15 Feb 2006); some repetition
- Materials summarized:
 - Reports of national and other metadata initiatives/projects
 - Regional/local profiles (most ISO 19115 based)
 - And many also DC compliant to some extent
 - Most service metadata based on ISO 19119
 - Some metadata software or demos
 - Some on-line materials not valid (broken links)
- Materials were analyzed by DT members
- 8 questions asked of each (see next slide)
- Special communities (WMO, EEA) addressed

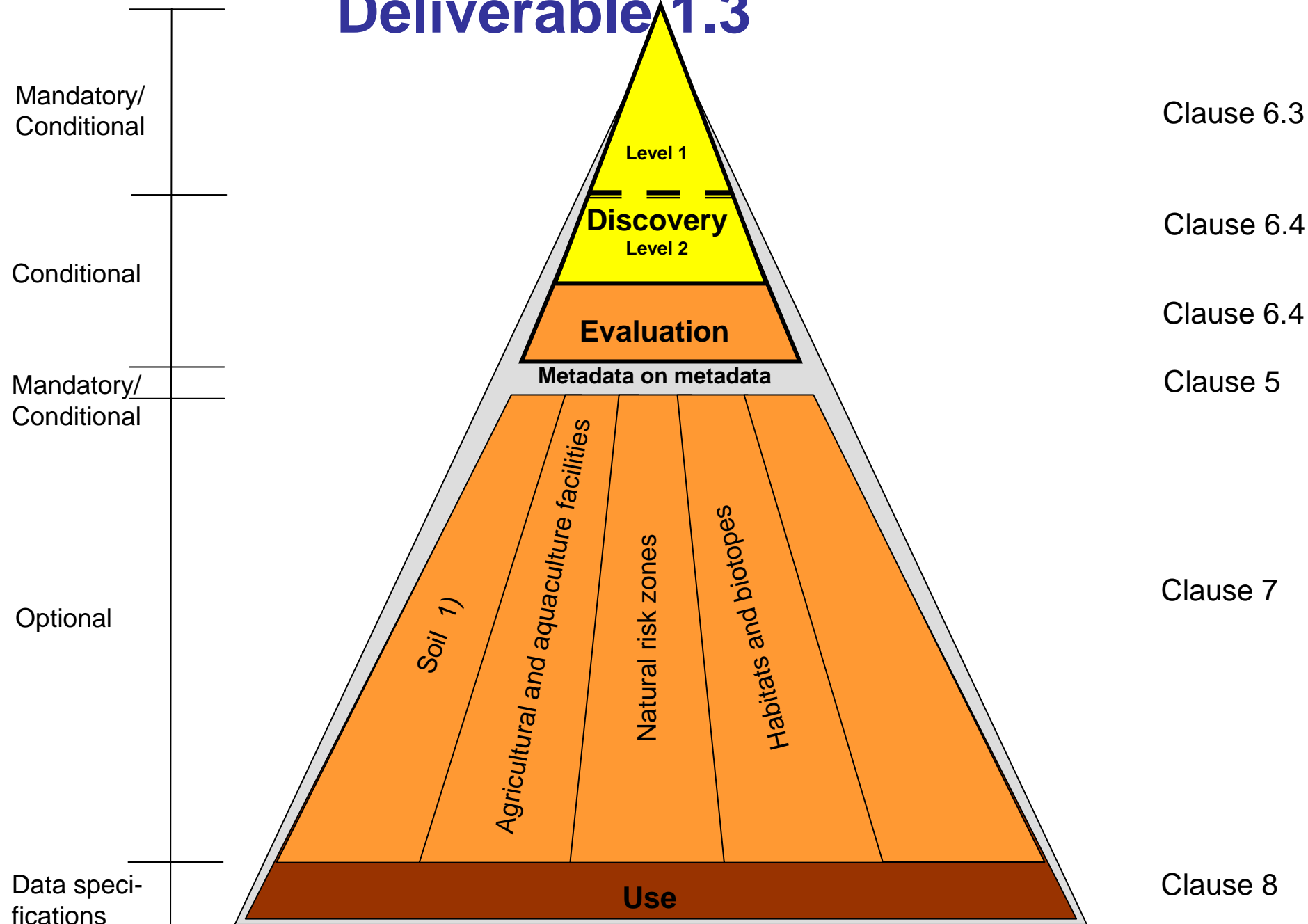
Questions used in analyzing material

1. Does the reference comply with existing metadata standards, or define extensions to them?
2. Which requirements of the INSPIRE directive (as defined in art8 and art18) are covered?
3. Does the reference document address spatial data, services, or both?
4. Does the reference define core metadata elements?
5. Does the reference document refer to thematic data? If yes, does it address INSPIRE Annexes I, II, and III
6. Does the reference document address multi-lingual and/or multi-cultural (in the sense of user-community-specific) aspects?
7. Is the reference document a mature standard, well accepted and commonly used or does it represent a recent proposal?
8. Does the document present new and interesting ideas regarding metadata?

Conclusions

- No real surprises
- Primarily:
 - ISO 19115 / ISO 19119
 - And also DC
 - No other standards but we have to keep the way open for future new standards
- Secondly:
 - CEN WD European core for discovery
 - OGC, 2005, OpenGIS® Catalogue Services Specification 2.0
 - OGC, 2005, ISO19115/ISO 19119 Application Profile for CSW 2.0
- Of important help:
 - Some relevant issues of reference material

Deliverable 1.3



¹⁾ The mentioned INSPIRE Spatial Data Themes are pointed out as examples to give an impression



Table of content

Foreword	Annex A ISO 19115 / ISO 19119 implementation
Background	Annex B ISO 15836 implementation of discovery level-1
Purpose of the document	Annex C Applicability of the available standards
1. Scope	Annex D Mapping of the INSPIRE spatial data themes to code list B.5.27 of ISO 19115
2. Normative references	Annex E The conformity of spatial data sets with the implementing rules referred to in Article 11(1); (Art. 8, 2 (a) and Art. 18, 2 (d))
3. Terms and definitions	Annex F Quality and validity of spatial data; (Art. 8, 2 (c))
4. Vision on Metadata	Annex G Bibliography
5. General implementing rules	
6. Implementing rules for discovery	
7. Implementing rules for evaluation	
8. Implementing rules for use	

Abstract discovery set – level 1



Metadata element	Search	Response	Condition
Any Text	X		
Resource title	X	1	
Reference date	X	1..*	When the resource is valid only in a time period
Geographic extent of the resource	X	0..*	Mandatory for datasets and dataset series
Resource language	X	0..*	When dataset or dataset series has textual information
Resource topic category	X	0..*	Mandatory for datasets and dataset series
Keyword	X	1*	
Spatial resolution	X	1	Mandatory for datasets and dataset series
Service type	X	0..*	If the resource is a service, or if a service is available to process the resource (datasets and dataset series)
Resource responsible party		1..*	
Abstract		1	
Resource locator		0..*	When a linkage to the resource or a contact point for more information about the resource is available

Abstract discovery set – level 2



Metadata element	Search	Response	Condition
Constraints		0..*	When there are constraints regarding access or usage
Lineage		0..1	When a quality report or other lineage statements are required
Service type version		0..*	If the service is a well known service type
Operation name		0..*	If the resource is a service
Distributed computing platform		0..*	If the resource is a service
Resource Identifier		0..1	If an identifier is available

Rough planning (updated WP)



Deliverable	Title	Milestone	Who
D 1.1	Requirements for the Definition of the INSPIRE Implementing Rules for Metadata <i>General guidelines delivered in the pre kick-off meeting documents; can be elaborated on basis of DT discussion</i>	9/2005	CT
D 1.2	Defining requirements for content and structure of metadata for spatial data based on a survey of existing initiatives, reference material and solutions	6/2006	DT/CT
D 1.3	Draft Implementing Rules for discovery, use and evaluation metadata and rules for extending the INSPIRE metadata set for specific spatial data themes	6/2006	DT
D 1.4	Final draft Implementing Rules for discovery, use and evaluation metadata for spatial data and rules for extending the INSPIRE metadata set for specific needs of spatial data themes.	2/2007	CT/DT

Planning more detailed D1.2 / D1.3

- First Draft 20060701
- I(nternal) consultation DT / CT July/August
- DT Metadata working on comments I September
- Second draft 20061001
- R(eview) by SDICs/LMOs October/November
- DT Metadata working on comments R December
- Third draft 20070101
- Third draft will be formed in formal IR by the commission
- Public consultation
- Final draft (only advice DT Metadata)

PC1

Is DT Metadata working only on the comments of the SDICs/LMOs or will be in this stage already the commission involved that will write the IT itself (formally)
Preferred Customer, 6/11/2006

Open issues

- Multilingual / multicultural
- Addressing of Thesauri
- Some more specific cross DT-issues (like detailed constraint implementation within metadata)
- Maybe more (not defined)

PC2

Is DT Metadata working only on the comments of the SDICs/LMOs or will be in this stage already the commission involved that will write the IT itself (formally)
Preferred Customer, 6/11/2006

Questions / discussion