

Metadata Standards for Geospatial Data Sharing

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Metadata Standards for Geospatial Data Sharing – Introduction

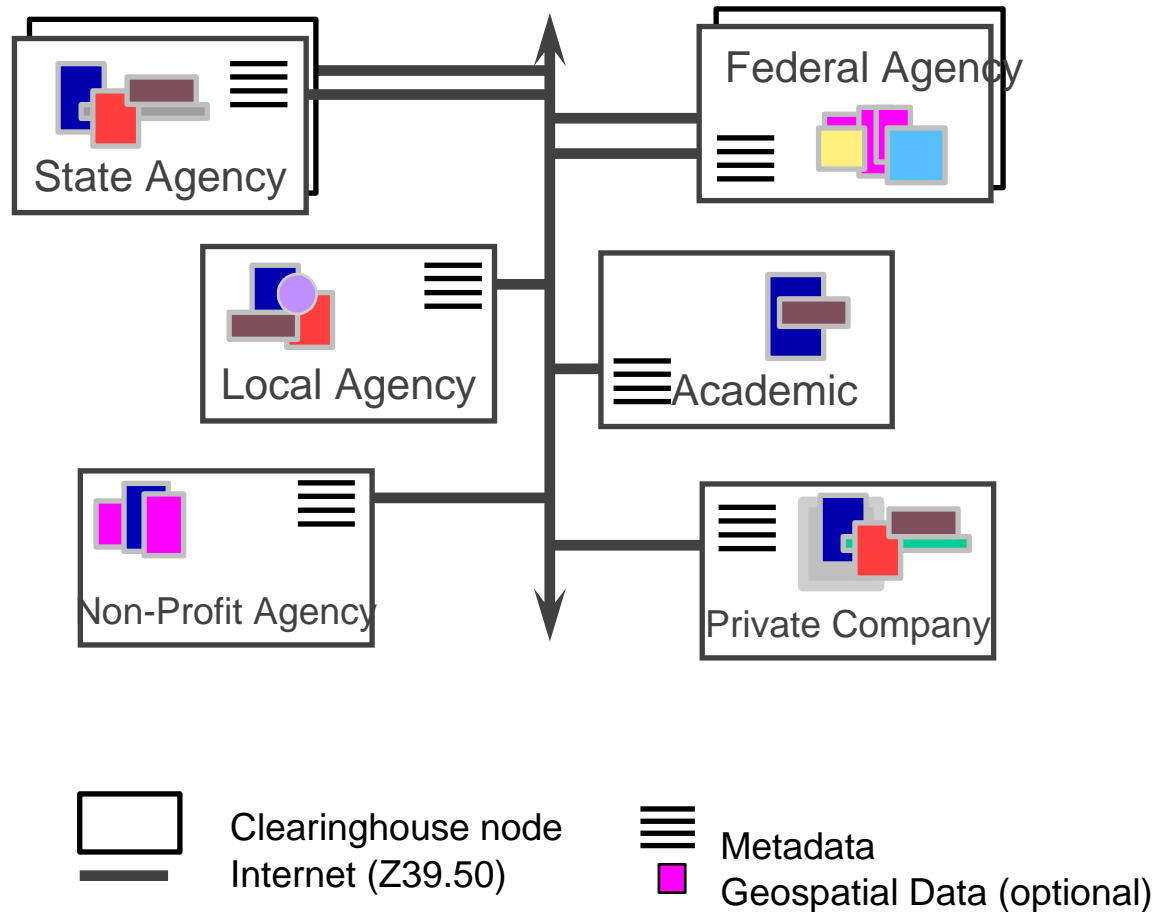
- What is Metadata?
- Why Metadata?
- Existing Metadata
- Essential Elements of Metadata
- ISO Metadata

What is Metadata?

Resume of spatial data

- Who?
- When?
- How?
- What?
- Where?
- Cost?
- Purpose?

An example of the use of metadata standard for making geospatial data sharing possible



Use of Metadata in GIS Data Sharing

Sample Existing GIS Metadata

- **USA:** Content Standards for Digital Geospatial Metadata, Federal Geographic Data Committee (FGDC)
- **USA:** Application Profile for the Government Information Locator Service (GILS)
- **Australia-New Zealand:** Proposed Framework for Core Metadata Elements: Version 1 For Land and Geographic Data Directories in Australia and New Zealand (ANZLIC)
- **Canada:** Directory Information Describing Digital Geo-Referenced Data Sets, National Standard of Canada

Sample Existing GIS Metadata - 2

- **ENV 12657:** 1998 Data Description - Metadata (developed by CEN/TC 287)
- **International Hydrographic Organization (IHO):** Digital Geographic Standard for Hydrographic Data (IHO S-57)
- **NATO:** The Digital Geographic Information Exchange Standard (DIGEST)
- **International Organization for Standardization (ISO):** ISO 19115: Geographic Information - Metadata

Existing GIS Metadata: A Comparative Review

- Tschangho John Kim, 1999, “Metadata for Geo-spatial Data Sharing: A Comparative Analysis”, in Special Issue of the Annals of Regional Science, 33-2:171-182, Springer-Verlag, Berlin.

Summary Findings

- FGDC, DIGEST and ISO/TC 211: Most Elements covered
- Those elements included in six or more existing Metadata:

good candidates for mandatory elements to be included in developing any new Metadata.

INTERNATIONAL
STANDARD

ISO
19115

First edition
2003-05-01

Geographic information — Metadata

Information géographique — Métadonnées



Reference number
ISO 19115:2003(E)

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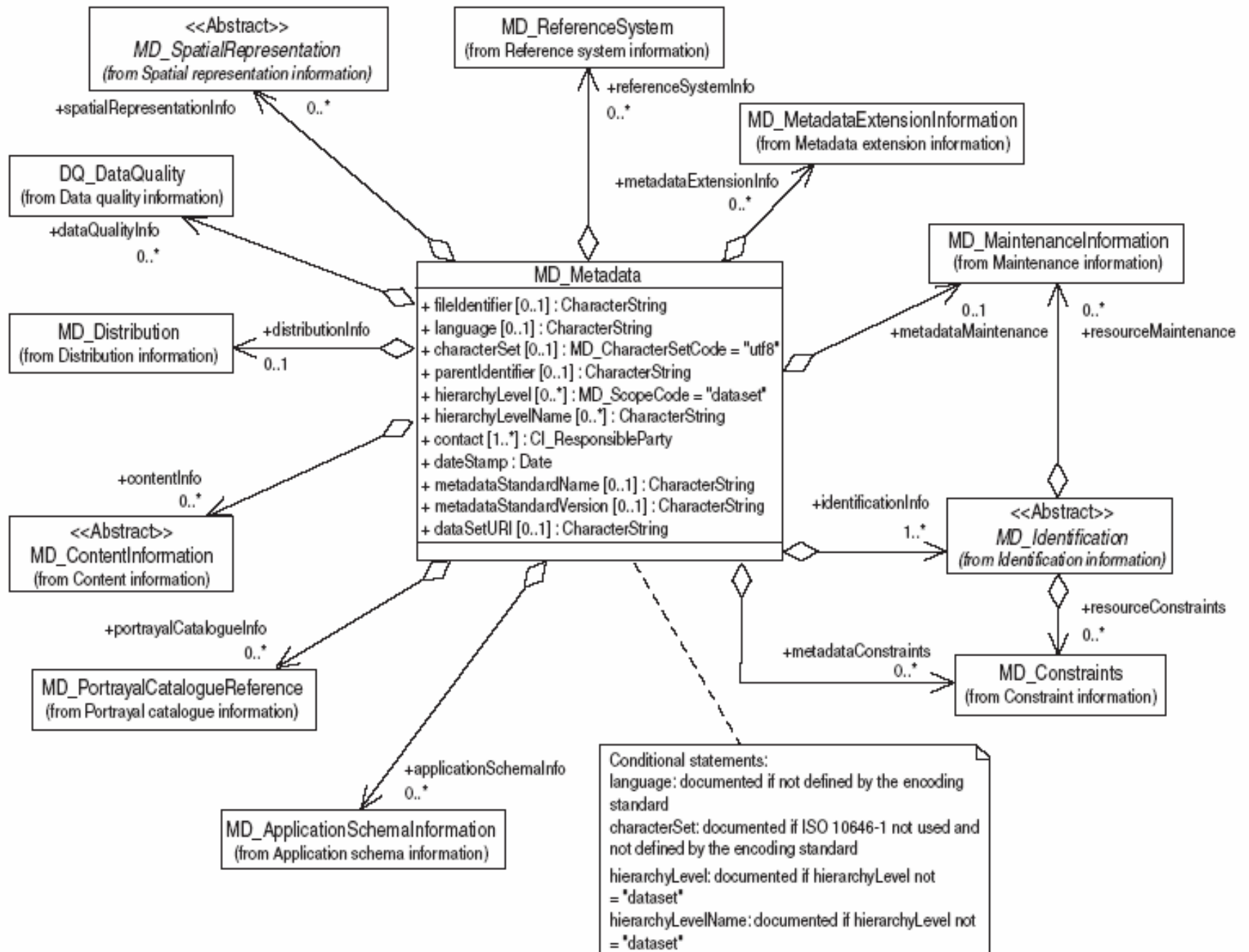
What ISO 19115 is for?

- Defines **metadata elements**
- Provides a **schema (UML)**
- Establishes a common set of metadata terminology, definitions (**data dictionary**)
- Provides extension procedures

Scope

- This International Standard defines:
 - **mandatory** and **conditional** metadata sections, metadata entities, and metadata elements;
 - the minimum set of metadata required to serve the full range of metadata applications (data discovery, determining data fitness for use, data access, data transfer, and use of digital data);
 - **optional** metadata elements – to allow for a more extensive standard description of geographic data, if required;
 - a **method for extending** metadata to fit specialized needs.

Metadata schema UML models



On-going Metadata Work

- ISO/TS 19139 Geographic information - Metadata - [XML Schema Specification](#)
- ISO 19115-2 Geographic information - Metadata - [Part 2: Extensions for Imagery and Gridded Data](#)