TECHNICAL INTRODUCTION TO SDI

Metadata and Data Catalogues

Danny Vandenbroucke

KU LEUVEN

- FDI Architecture and FDI components
- XML and UML reading and understanding
- Overview of FDI rules
- **Metadata and Data Catalogues**
- Data templates and data specifications
- Creation of view services
- Introduction to data & Copernicus Services
- Quality assurance test & validation

- Metadata Definition
- Standards for Geographical Information
- Metadata Search — Discover Geographical Information
- Classification services — standardisation
- Metadata quality
- Metadata publishers and how to look for data
- Spatial Data Portal — Geoportal

Once this module is complete, the student must be able to:

- Describe the role of EID and Geoportal in providing spatial data
- Able to search, find and download spatial data via portals
- Describe the role of metadata in search engines
- Ability to integrate WMS and WFS on request (e.g. ArcGIS)
- Please list some important spatial data portals
- Indicate some recent trends and developments

Focus on the user's perspective!

Have in mind previous modules on the **creation of a FDI** to better understand technical aspects and standards

Entrance door

Metadata is like onions...
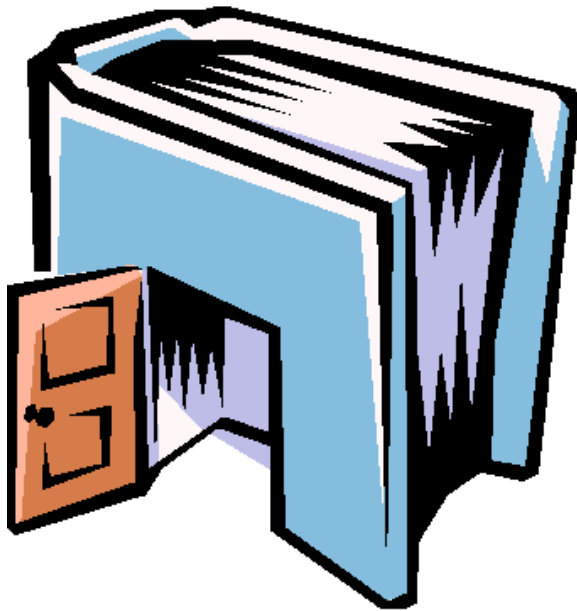
DONKEY: They stink?

DONKEY: Oh, they make you cry?

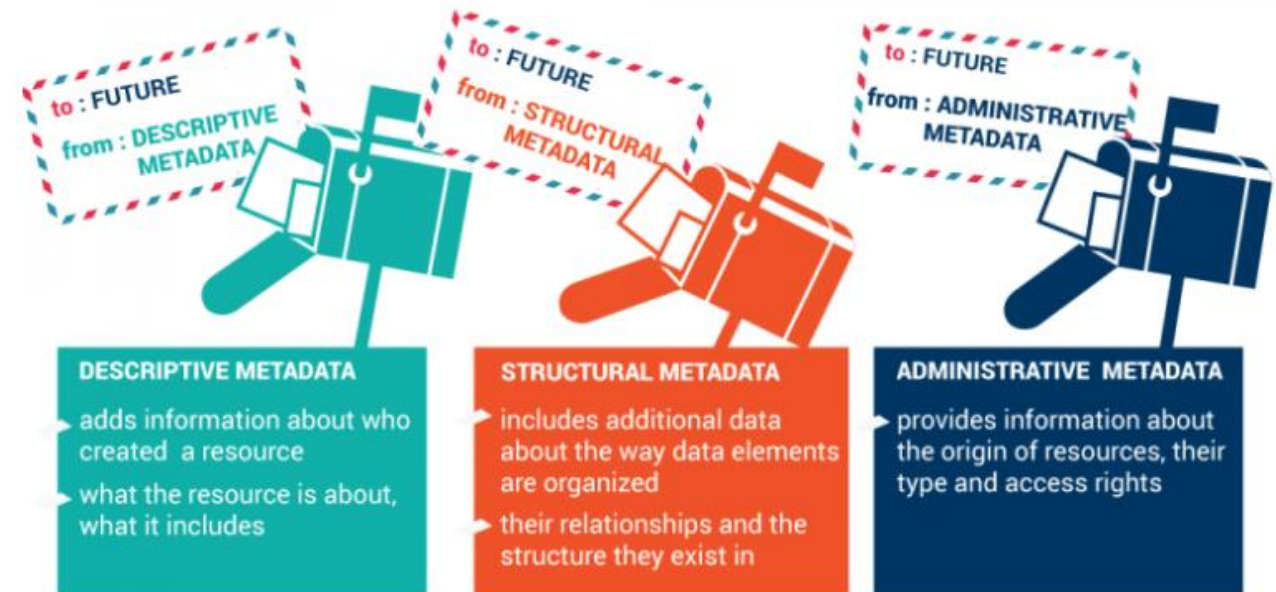DONKEY: ... You know, not everybody like onions.

Data on data or "*a love note for the future*":

"The metadata, as you see, are really a note of love — it can be itself, but it is in fact a note of love for the person or maquine who after you saved him time to know what they have found." (Scott)

Data about data
- Data set data
- Tool data
- Services data
- Lectures data

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DESCRIPTIVE METADATA
- adds information about who created a resource
- what the resource is about, what it includes

STRUCTURAL METADATA
- includes additional data about the way data elements are organized
- their relationships and the structure they exist in

ADMINISTRATIVE METADATA
- provides information about the origin of resources, their type and access rights

Food in refrigerator
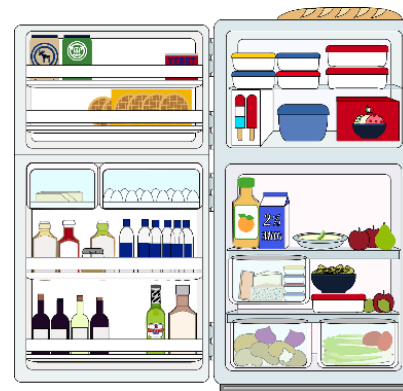
How do you know what each container contains?

What is the period of validity?

How to prevent dethioations?

How to store products by categories?

How to catalogue the allergens?

(...)

What?— Name, fineness, small description of available resources;

Who? — Producer, owner

Where?— Coordinates, place(s)

Why?— Provision for collecting data

When?— Time information and maintenance

How?— Access to data, data lineage

- **What to do with the geographical information?**
  - Data sharing
  - Easy to access
  - Manageability
  - Easy data processing
  - **Storage of various types of data**
  - Useful and accurate information analysis
  - Organisational needs
  - Consistency and safety
- **Creation Metadata**

Yves Lacoste
La géographie, ça sert, d'abord, à faire la guerre
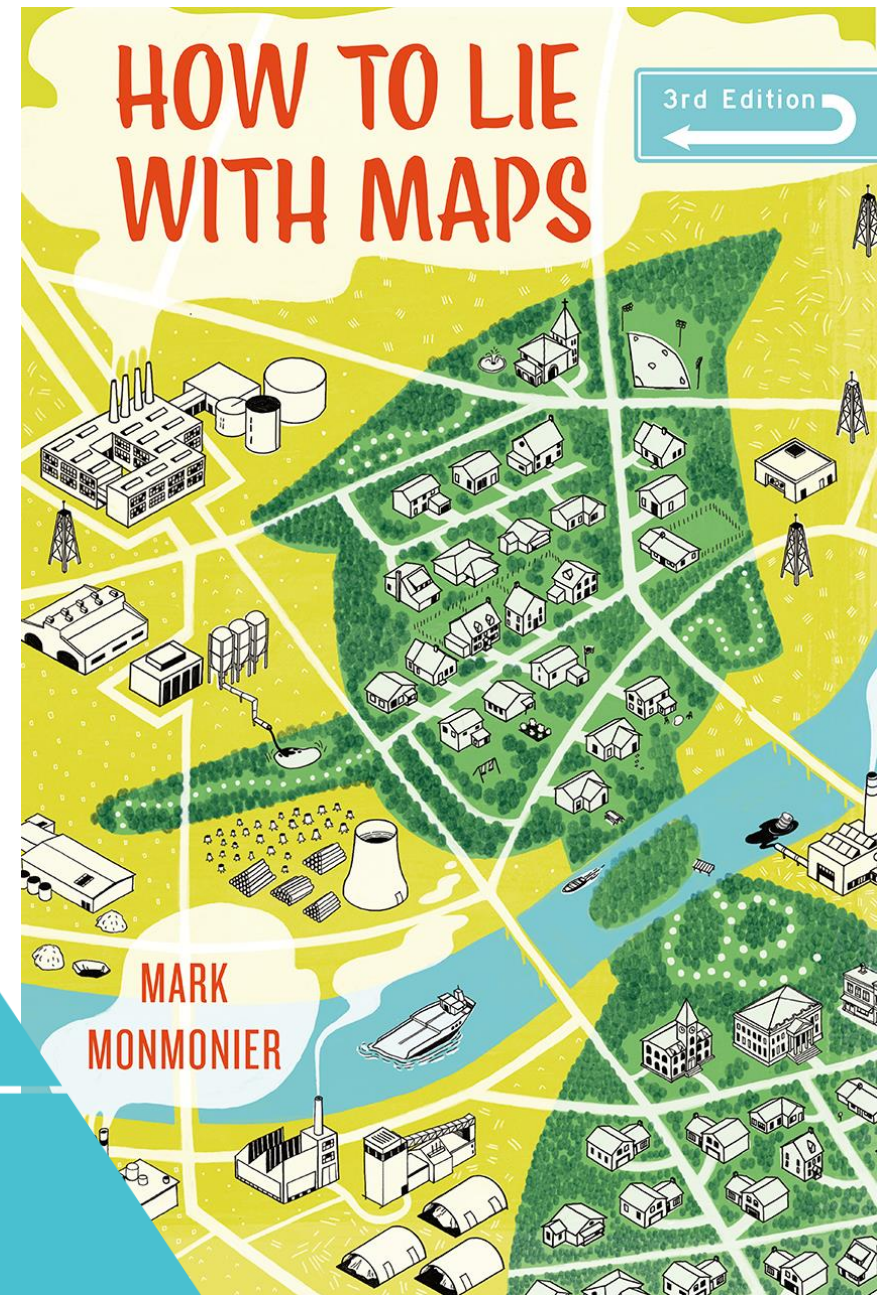
Édition augmentée

La Découverte/Poche

HOW TO LIE WITH MAPS
3rd Edition

MARK MONMONIER

Wisdom

Knowledge

Information

Data

Knowledge of reality

Metadata

Management of relational databases

Tools and techniques in Geographic Information Systems

Obtaining the geographical information of the different sources in the country where most of the data used by governmental institutions have a spatial nature

Gathering, mapping and **cataloguing** the different types of information available has a high cost

Manage large amounts of information

Norms and **Standardise** concepts

Metadata Creation

A lot of information is collected by different actors, repeatedly and if the information is not searchable, available and up to date, it is difficult to find

- What does the metadata tell us about the meaning of the data?
- What data do we care about and when was it produced?
- Who was the producer? How was it produced and why (objectives)?
- When produced from other data, what was the data?
- What was the initial source of this data?

If these questions are not answered, how can we assess whether or not these data interest us? Whether or not it is correct and serves our purposes.