



Progress on metadata

Standards implementation for data and services



ICGC
Institut
Cartogràfic i Geològic
de Catalunya



Generalitat
de Catalunya

Contents

- Data

- MIGRA - Spanish standard
- ISO 19115:2003 ⇔ ISO/TS 19139:2007
- ISO 19115-2:2009 ⇔ ISO/TS 19139-2:2012
- ISO 19115-1:2014 ⇔ DTS 19115-3

- Services

- ISO 19119:2005 ⇔ ISO/TS 19139:2007
- ISO 19115-1:2014 ⇔ DTS 19115-3

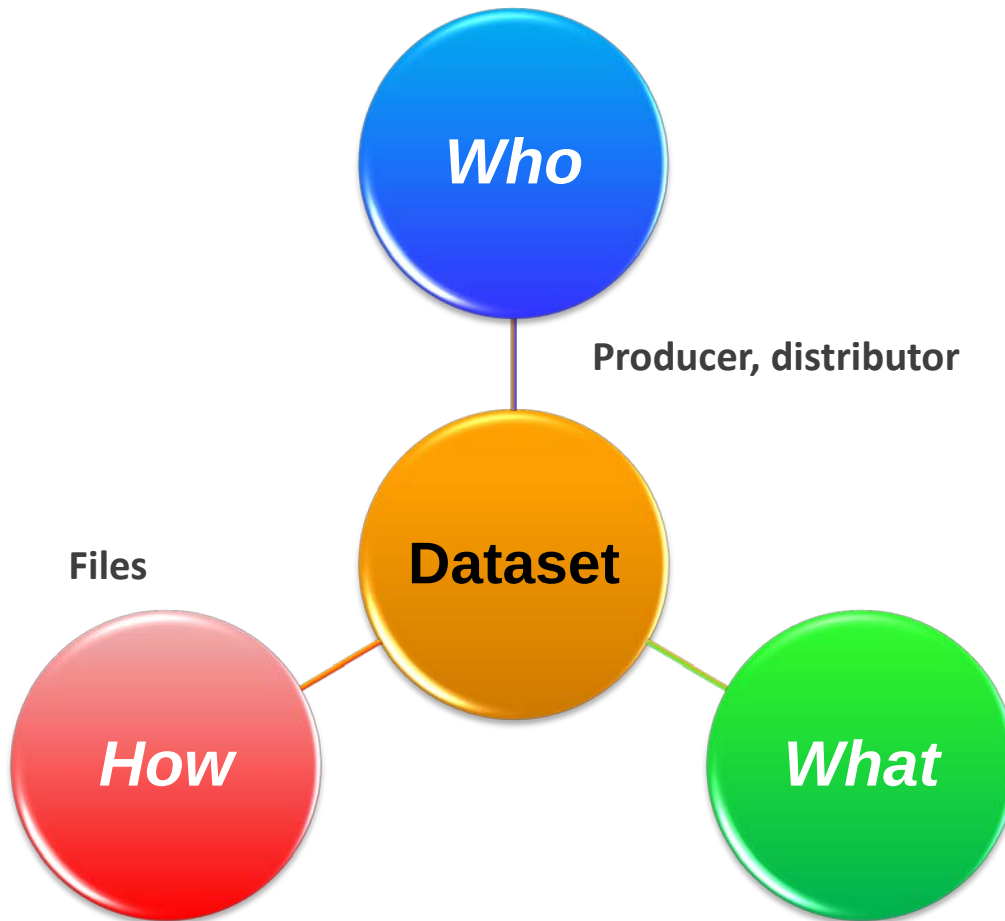
MIGRA - 1998

Metadata as marginalia

Mechanism of exchanging relational geographic information formed by aggregation

- Digital spatial data
- Metadata to add information about data ⇔ Marginalia

MIGRA



IMPLEMENTATION

[SECTION01]

VARIABLE01_1=

VARIABLE01_1=

...

[SECTION02]

VARIABLE02_1=

VARIABLE02_2=

...

[PRODUCTOR_ORGANISME]
NOM_ORGANISME=Institut Cartogràfic de Catalunya
NOM_ABREVIAT_ORGANISME=ICC
ADRECA=Parc de Montjuïc
CODI_POSTAL=E-08038
LOCALITAT=Barcelona
ADRECA_URL=http://www.icc.cat

```
[DADES]
NOM_CONJUNT_DADES=Base topogràfica de Catalunya 1:25 000
NOM_ABBREVIAT_CONJUNT_DADES=BT-25M
VERSION=1.0
SISTEMA_REFERENCIA=ED50
ELLIPSOIDE=Hayford 1924
DATUM=Pot-dans
DATUM_VERTICAL=Nivell mitjà de la mar, amb origen a Alicante
PROJECCIO=UTM
NOMBRE_PARAMETRES_PROJECCIO=2
NOM_PARAMETRE1=Plus
VALOR_PARAMETRE1=31
NOM_PARAMETRE2=Fals nord
VALOR_PARAMETRE2=0
ESCALA=1:25 000
MODE=Vectorial
ESTRUCTURA_TPOLOGICA=Hemmes geometria
CONJUNT_CARACTERS=ISO 8859-1
NOMBRE_FIXTERS_COMPLEMENTARIS=13
FIXTER1_COMPLEMENTARI=bt25smv10dgm_77ca.pdf
FIXTER1_COMPLEMENTARI=bt25smv10dgm_77ca.pdf
FIXTER1_COMPLEMENTARI=bt25smv10dgm_77ca.pdf
...
FIXTER11_COMPLEMENTARI=bt25sm10dgcscolmapa_77.tbl
FIXTER12_COMPLEMENTARI=mscsclog.dif
FIXTER13_COMPLEMENTARI=bt25sm10dgcscolmapa6601.dif.exe
```

```
[CONTINGUT]
DESCRIPCIO_FONT1=Cartaogràfica de l'àmbit d'un full 1:25 000
REVISIO=1
CORRECCIO=0
FORMAT_DISTRIBUCIO=MicroStation Design File (DGN)
VERSIÓ_FORMAT_DISTRIBUCIO=7
OPCIO_FORMAT_DISTRIBUCIO=NA
IMPLEMENTACIO_FORMAT_DISTRIBUCIO=0
NOMBRE_DIMENSIONS=2.5
UNITATS_X_Y=mm;dm;cm
RESOLUCIO_X_Y=0;0;1
UNITATS_Z=mm;dm;cm
RESOLUCIO_Z=0;0;0.1
SISTEMA_IDENTIFICADORS_GEOGRAFICS=Tall 1:25 000 MTN
NOM_AREA_GEOGRAFICA=NO
NOMBRE_CODIS_AREA_GEOGRAFICA=2
CODI_AREA_GEOGRAFICA=72-139
CODI_AREA_GEOGRAFICA-217-1
NOMBRE_CANTONADES=13
CANTONADA1=416222-5.1,4706005-8.4
CANTONADA2=419646-18.3,4870595-4.0
--
CANTONADA3=4249824-1.8,4696606-9.6
CANTONADA4=3426395-9.8,4696636-36.4
NOMBRE_FONTS_INFORMACIO=6
DESCRIPCIO_FONT1=Base topogràfica de Catalunya 1:50 000 v2.0
DATA_FONT1=ND
DESCRIPCIO_FONT2=Imatges aèries de diverses escales
DATA_FONT2=2005-08
DESCRIPCIO_FONT3=Sistema de Posicionament Geodesic de Catalunya
--
DESCRIPCIO_FONT5=Projectes de noves infraestructures de vials i ferrocarrils
DATA_FONT5=2006-09
DESCRIPCIO_FONT6=Base topogràfica de Catalunya 1:50 000 v3.1 f4
DATA_FONT6=ND
NOMBRE_FITXERS=34
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```
[FITER_1]
DESCRIPCIO=Altimetria (linies, punts, centroides, textos)
FITXER=bt25mv10dg0f7219ax0r010.dgn
```

[FITXER_7]
DESCRIPCIO=Atributs d'altimetria (línies)
FITXER=bt25mv10dg0f7219a10r010.dbf

Data, contents

ISO 19115

Metadata for a catalogue

Its implementation should be useful to:

- Provide information to characterize geographical data.
- Enable apply geographic data in the most efficient way.
- Facilitate data discovery, retrieval and reuse.
- Enable users to determine whether geographic data in a holding will be of use to them.

Users ~~will be better able to~~ **locate, access, evaluate**, purchase and utilize geographic data.

ISO 19115

Metadata to locate

Data identification for catalogue purposes

- Dataset existence on a specific topic (What)
- Dataset existence for a specific place (Where)
- Dataset existence for a specific period (When)
- Point of contact to learn more or order (Who)

Metadata to evaluate

Data quality to choose the most appropriate

- Data origin - Knowledge about sources or processes or lack of it
- Goodness of data
- Usage

ISO 19115

Metadata to access

Data obtaining

- Distribution:
 - Distributor
 - Transfer options (online / offline) for digital data, order process
 - Formats
- Conditions:
 - Limitations of use
 - Legal and access constraints

Implementation

Technical

Applications to create, edit and validate metadata according to the implementation standard ISO 19139

- ISO 19139 > MetaD, CatMEdit, GeMM, GeMa...

Software to create and publish a CSW

- OGC-CSW 2.0.2 > Geonetwork, terraCatalog, pycsw...

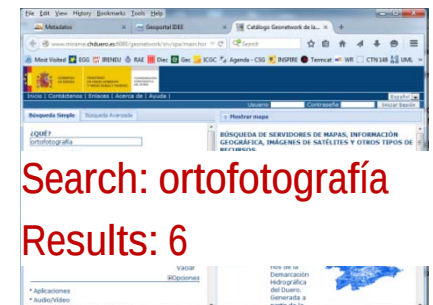
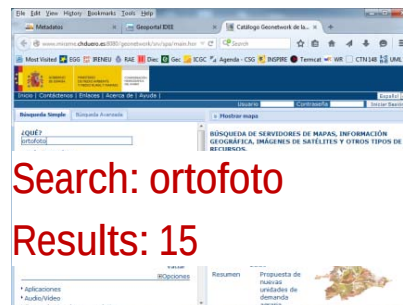
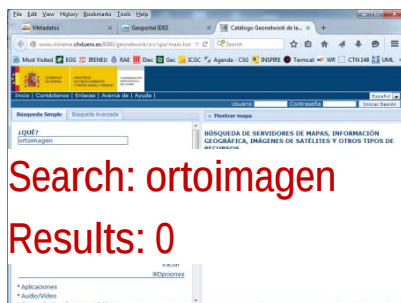
Tools and mechanisms to connect catalogues

Implementation

Useful

To locate

- The minimum items required is not always enough
 - What > title, abstract, keywords
 - Where > bounding box, keywords
 - When > temporal extent, revision date, keywords
 - Who > point of contact, contact, distributor...
- Textual items require complex search engines (semantics multilingual aspects, orthographic mistakes...)



Implementation

Useful

To evaluate

- Lineage
 - Origin > statement
 - Sources > description, extension (spatial, temporal)
 - Process > description
- Goodness
 - Conformance results
 - Quantitative results
- Quantitative information should be displayed graphically and ready to be compared



Implementation

Useful

Búsqueda de Servicios de mapas, Información Geográfica y otro tipo de recursos.

Información de Distribución

Nombre	SHP-ArcView ShapeFile
Versión	10.0
Nombre	ArcSDE sobre Oracle

Distribuidor

Nombre de la organización	Fondo Español de Garantía Agraria (FEGA), Subdirección General de Ayudas Directas - Ministerio de Agricultura, Alimentación y Medio Ambiente (MAGRAMA)
Teléfono	(+34) 91 347 64 68
Fax	(+34) 91 347 64 65
Dirección	C/ Beneficencia nº 8
Ciudad	Madrid
Provincia (área administrativa)	Madrid
Código Postal	28004
País	España
Correo electrónico	sq.ayudasdirectas@fega.es
Rol	Distribuidor: Parte que distribuye el recurso.

Opciones de transferencia

Enlace	Descripción del Servicio de SIGPAC: http://wms.magrama.es/wms/wms.aspx?Request=GetCapabilities
Enlace	Visor SIGPAC nacional: http://sigpac.magrama.es/fega/visor
Enlace	Información del Ministerio sobre el Sistema de Información de Parcelas Agrícolas (SIGPAC): http://www.magrama.gob.es/es/agricultura/temas/sistema-de-informacion-geografica-de-parcelas-agricolas-sigpac-
Enlace	Información sobre el Visor SIGPAC: https://www.fega.es/PwfGcp/es/ayudas_dir_desa_rural/aplicacion_sigpac/index.jsp

ISO 19119

Metadata for a catalogue

Its implementation should be useful to:

- Provide information to identify the service and describe the service operations.
- Provide information about the data available from the service

Service metadata should be derived from service capabilities.

Summary

- **Discovery**
 - There are metadata but the contents is not always enough to locate, evaluate or access the data.
- **Evaluation**
 - Lineage is relevant to know the age of the spatial data.
- **Access**
 - It's not possible to access directly the data from the metadata.

Ongoing

- Location
 - Metadata and web searching engines
 - Simple / refined searches
 - Display results grouped / ordered
- Evaluation
 - Use of graphics to show metadata
 - Focus the attention on key elements
- Access
 - Link between data and services more relevant
 - Historical datasets

Dolors Barrot Feixat
dolors.barrot@icgc.cat

**Institut Cartogràfic i Geològic
de Catalunya**
Parc de Montjuïc,
E-08038 Barcelona
41°22'12" N, 2°09'20" E (ETRS89)
🌐 www.icgc.cat
✉ icgc@icgc.cat
🐦 twitter.com/ICGCat
📘 facebook.com/ICGCat
Tel. (+34) 93 567 15 00
Fax (+34) 93 567 15 67

