

SDMX

Geonetwork

GeoServer deegree

CSW – WFS - WMS

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What is SDMX?

An ISO standard

Statistical **D**ata and **M**etadata **eX**change

Sponsored and used by BIS, ECB, EUROSTAT, IMF, ECD, UN and World Bank

Used by national statistical institutes and other public organisations

Why using SDMX?

Because it is time to use a mature standard rather than CSV

SDMX provides a model, standards and structures for statistical data

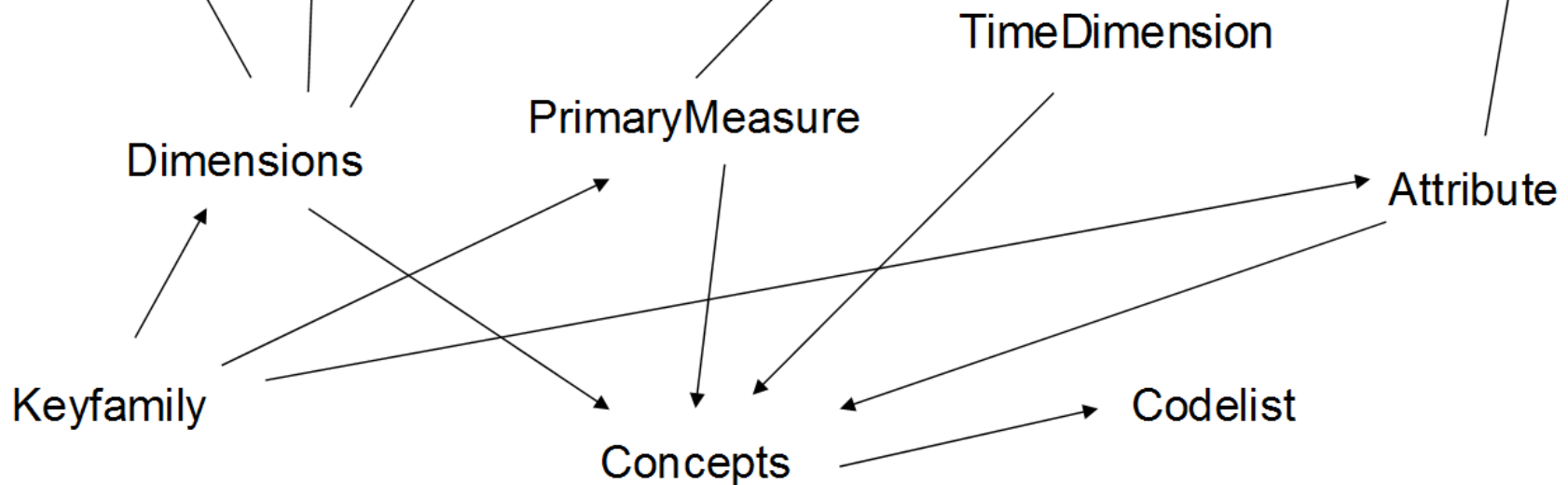
Based on XML

Use Cases

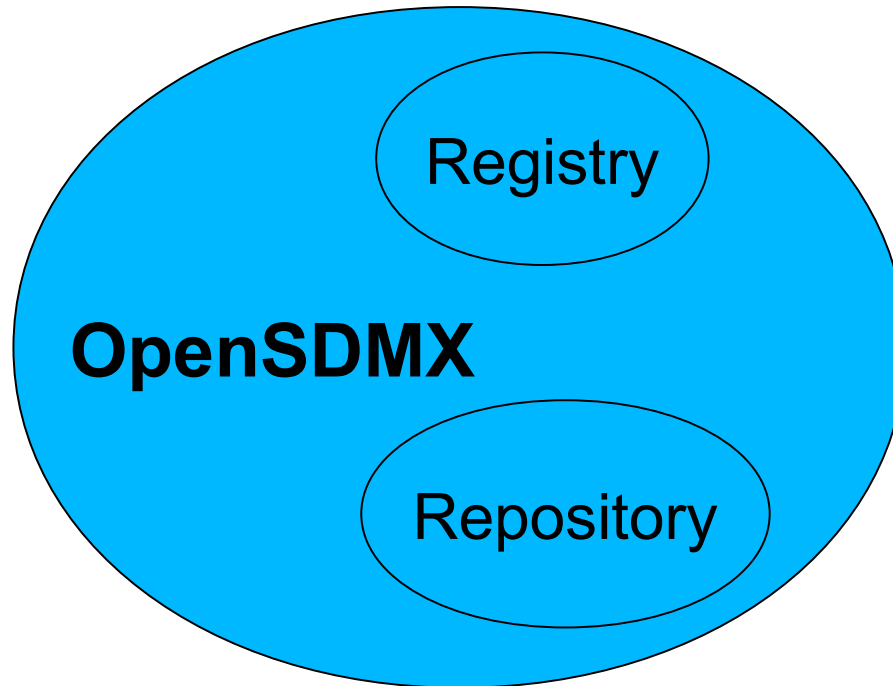
- Harmonization of classifications (codelists)
- Harmonization of structures (Data Structure Definitions)
- Organisation of data and metadata
- Visualization
- Dissemination
- Collection

SDMX 4 Dummies

FMA	REF_COUNTRY _ISO3	REF_SPECIES_ ALPHA_3_CODE	CATCH	TIME	MOU
07	ITA	TUN	3244	1990	ktonne



SDMX Registry and Repository



Registry is for metadata:

- concept
- codelist
- Datastructure definition (DSD)
- etc.

Repository is for data:

- GenericDataset
- CompactDataset
- etc.

Spatial SDMX

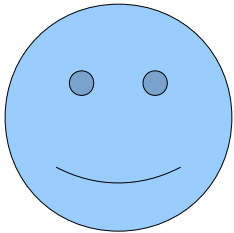
SDMX Registry = metadata = CSW

SDMX Registry of Registries = CSW

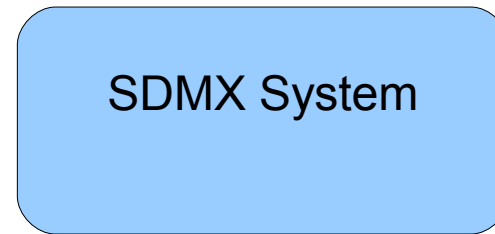
SDMX Repository = data = WFS, WMS

Spatial SDMX system and user

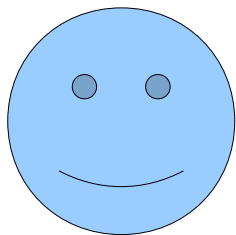
SDMX consumer



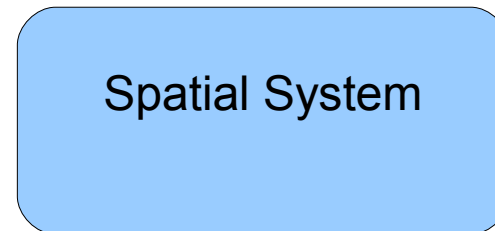
SDMX System



Communication
through
webservices



Spatial System



CSW, WFS, WMS client

Other directions of arrows are yet not considered

Spatial SDMX integration scenarios

SDMX system, spatial aware

SDMX system, spatial unaware

Spatial system (SDMX aware) using a SDMX system (spatial unaware)

Spatial system SDMX aware using a SDMX system (spatial aware)

SDMX system, spatial aware

Publishing datasets through WFS

Publishing all SDMX artefacts through CSW

Publishing spatial referenced SDMX codelists

Spatial system (SDMX aware) using a SDMX system (spatial unaware)

- **Geoserver** with datastore for SDMX datasets
- The SDMX codes are not spatially referenced
- **Geoserver** will publish the SDMX dataset as a map or through the WFS
- **Geoserver** knows how to spatially reference a non formal spatial referenced SDMX dataset
- **Geonetwork** publishes a document for every SDMX artefact found in a linked SDMX Registry and/or Repository
- **Geonetwork** knows how to spatially reference a non formal spatial referenced SDMX artefact

Spatial system (SDMX aware) using a SDMX system (spatial aware)

- **Geoserver** with datastore for SDMX datasets
- The SDMX dataset references SDMX Codelists
- The SDMX codes are spatially referenced
- **Geoserver** will publish the SDMX dataset as a map or through the WFS
- **Geonetwork** publishes a ISO 19115 document through the CSW for every spatial referenced SDMX artefact found in a linked SDMX Registry and/or Repository
- Every SDMX artefact is spatially referenced

*Open*SDMX

- Open Source Software project for SDMX
- Runs in FAO and D4Science
- Possible future collaboration with Eurostat and Bank of Italy
- REST webservice focussed
- Working on Olap (Mondrian) and CodelistManager
- Future roadmap: SDMX in JSON, Spatial SDMX

End

Resources

SDMX www.sdmx.org

SDMX 4 Dummies <http://opensdmx.wikispaces.com/SDMX+for+Dummies>

D4Science <http://www.d4science.org>

OpenSDMX <https://sourceforge.net/p/opensdmx/home/>

SDMX Spatial <http://opensdmxdevelopers.wikispaces.com/SDMX+Spatial>