



Dagstuhl 2022

Interoperability for Cross-Domain Research:
Machine-Actionability & Scalability

Primary and Reference Data
Interstat Case Study

The INTERSTAT Project

- Open Statistical Data Interoperability Framework
- Co-financed by the Connecting Europe Facility
- Partners
 - Industry: Engineering and Fiware
 - Public: Istat and Insee

The INTERSTAT Project

“The overall objective of INTERSTAT is to develop a framework that will allow the **interoperability**, by using **technical assets** and **common ontologies**, between national statistical portals and the European Data Portal, and the deployment of **cross-border services** that reuse European statistical open datasets from those portals.”

(One of) INTERSTAT's Objectives

Provide uniform technical interfaces for a standard and simple re-use of statistical information through the adoption of CEF **Context Broker** Building Block and the implementation of ETSI **NGSI-LD** API specification.

The Context Broker

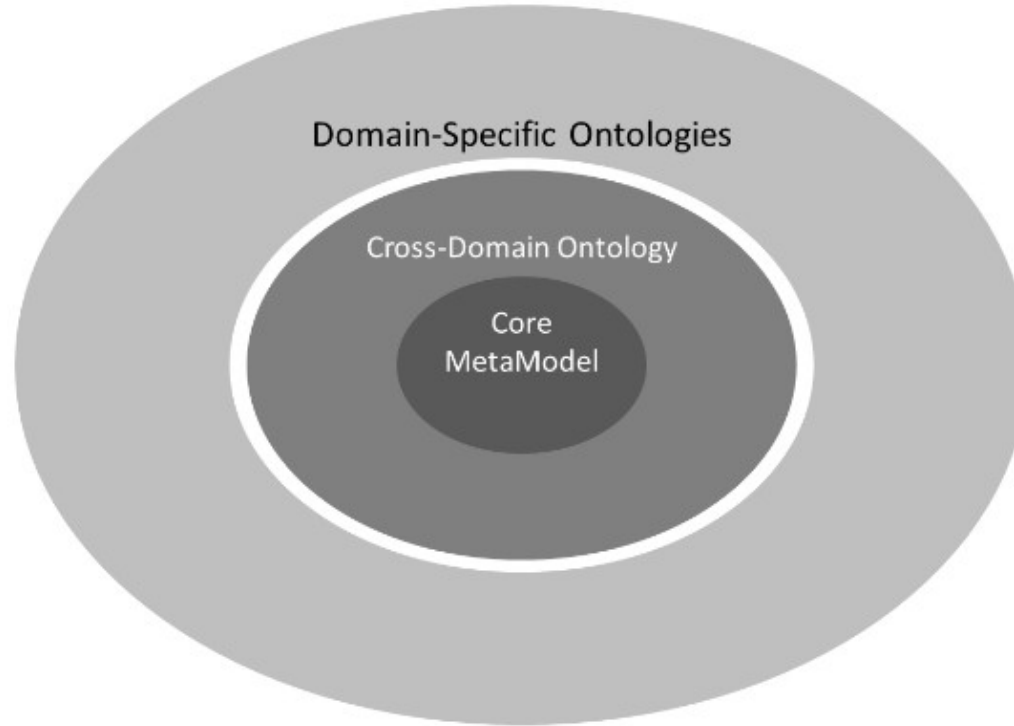
From Wikipedia:

- “In information and communication technologies, context awareness refers to a capability to take into account the situation of entities”
- “A Context Broker acts as the primary access point to context information for Context Consumers”

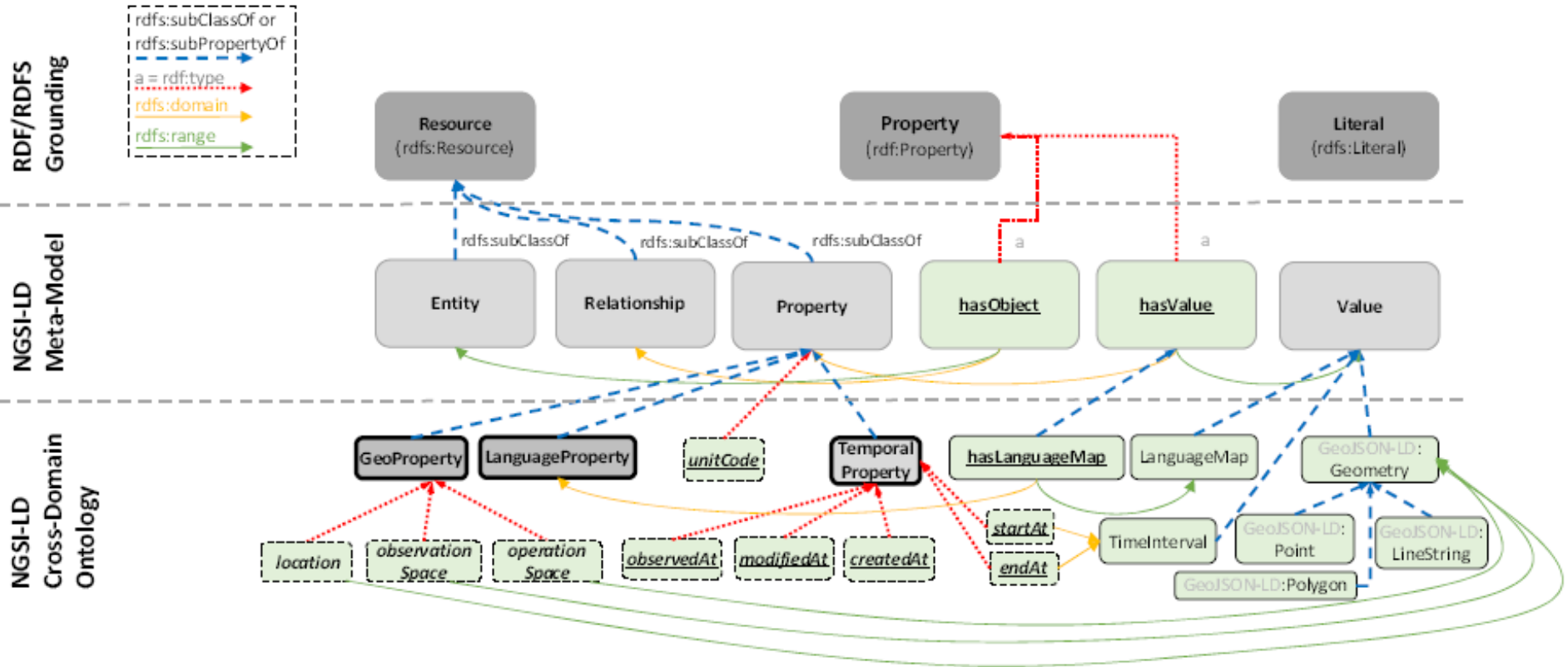
The NGSI-LD Standard

- Information model
- API specification
 - Operations (data consumption and provision, subscriptions, notifications...)
 - JSON-LD serialization
 - HTTP binding
 - ...

NGSI-LD Information Model



NGSI-LD Information Model



More in the [specification](#)

NGSI-LD Information Model

Outer layer: smart models



**Smart
Data Models**

- Nice ecosystem at

<https://smartdatamodels.org/>

- ~600 models covering various domains (Smart Cities, Smart Water, Smart Energy, Smart Health...)
- Strong policy of reuse between models

Problem statement

- Main objective: publish statistical data with the Context Broker
- Boils down to interoperability between NGSI-LD and statistical information models (SDMX, DDI-CDI, etc.)
- → Explore the subject on the basis of INTERSTAT pilots

What was done last year

- DDI-CDI representation of data structures from Interstat pilots
- Reflection on how to attach that to DCAT metadata

What was done since last year

- Gap analysis/mapping between SDMX/DC and DCAT
 - Decide to use StatDCAT-AP as a basis
- Converter from SDMX/DC DSD to NGSI-LD
 - Currently tested on various types of DSD

What we could do

- Recap/review current results
- Review model mapping
- Extension to DDI-CDI

Questions

- Status, evolution, governance of StatDCAT-AP
- Way forward