Semantic Statistics:
Bringing together SDMX and SCOVO

LDOW 2009 | Richard Cyganiak, Jeni Tennison, Arofan Gregory, Wolfgang Halb, Simon Field
Statistical data

- Average income per household in 2002 by UK administrative area
- Number of migrants to Ireland by country of origin
- Goods loaded/unloaded by port
Characteristics of Statistical data

- Aggregate data
- Numeric
- Time series
- Multi-dimensional tables, cubes
- Evidence for policy-making
- Open data!
Office for National Statistics workshop

- Workshop in Feb 2010
- ONS asks what to do about linked data
- Meeting of communities
- Use SCOVO? Use SDMX?
The Statistical Core Vocabulary (scovo)

This version:
http://purl.org/NET/scovo

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Abstract
This document specifies an [RDF-Schema] vocabulary for representing statistical data on the Web. It is normatively encoded in [XHTML+RDFa], that is embedded in this page.

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1. Overview
2. Classes
3. Properties
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SCOVO Overview
SCOVO use

- Riese (Eurostat)
- voiD, RDFstats
- LOIUS (Italian university statistics)
- German Environment Speciman Bank
- UK government data
SDMX

- Statistical Data and Metadata Exchange
- Development started in 2001
- EDIFACT and XML
SDMX Users

- U.S. Federal Reserve Board
- European Central Bank
- Eurostat
- WHO
- IMF
- World Bank
- OECD, UN and Eurostat expect publishers of national statistics to report in SDMX
SDMX in XML

```xml
<DataSetAction>Append</DataSetAction>
<Extracted>2001-03-11T09:30:47-05:00</Extracted>
<ReportingBegin>2000-01-01T00:00:00</ReportingBegin>
<ReportingEnd>2000-12-01T00:00:00</ReportingEnd>
</Header>
<bisc:DataSet>
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    <bisc:SiblingGroup VIS_CTY="MX" JD_TYPE="P" JD_CATEGORY="B" AVAILABILITY="A">
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          <bisc:Obs TIME_PERIOD="2000-05" OBS_VALUE="3.14" OBS_STATUS="A"/>
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    </bisc:SiblingGroup>
  </bisc:SiblingGroup>
</bisc:Series>
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    <bisc:Obs TIME_PERIOD="2000-01" OBS_VALUE="3.14" OBS_STATUS="A"/>
```
SDMX information model
Let’s express the SDMX information model in RDF
SDMX in RDF, part 3
Differences from SCOVO

- Distinguishing Dimensions and Attributes
- Data Structure Definitions
- Code Lists (SKOS)
- Re-usable Concepts
- Time Series and Groups within a dataset
Ongoing work

- Spec
- PESA data (Epimorphics)
- XSLT for SDMX-ML (Jeni)
- CSO statistics, PC-Axis (DERI)
- Meeting in July
Observations

- Domain standards capture domain expertise
- Unlocking valuable data
- RDF tooling is pretty good
- RDF advantage: re-use of standardization efforts (Dublin Core, SKOS, voiD)
Learn more

- **Paper**

- **Google Group**
  - Discussion list
    - http://groups.google.com/group/publishing-statistical-data

- **Google Code project**
  - Issue tracker
  - Spec drafts