

Empowering Enterprise Data Governance with BSG

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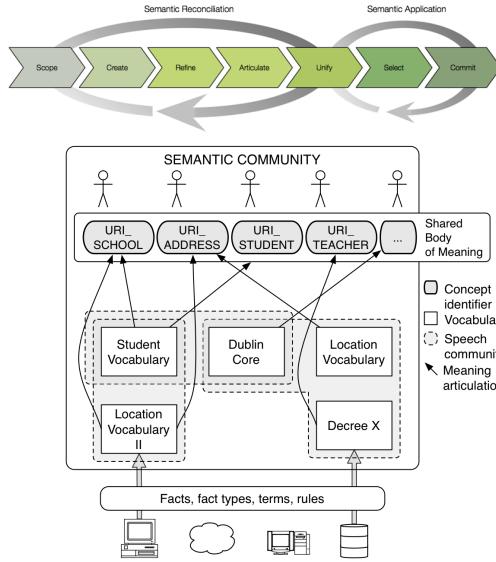
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Problem

For a Linked Data service market to flourish, one has to consider the data governance aspects. Especially in a business context, domain rules are important. One such important domain rule is an *conceptual identification structure*. Enabling communication and interoperation between *autonomously* developed information systems – each represented by stakeholders – requires an ontology. Community involvement is primordial and thus appropriate methods and tools are needed. One can draw inspiration from database modeling techniques.

Business Semantics Management

- Fact-oriented, adopting SBVR (Business rules)
- Two complementary cycles
- Ontology engineering vs. implementation



Business Semantics Glossary

- Built around wiki technology
- Community driven
- Natural language facts and definitions
- Export/Import from RDFS/OWL via MOF

A screenshot of a web-based application titled 'Home Address'. The interface includes a navigation bar with links to Home, Vocabularies, Speech Communities, Semantic Communities, Statistics, and Support Center. The main content area displays a detailed entry for 'Home Address'. It includes sections for Descriptions (e.g., 'An Address where a company or Legal Entity is located'), Fact Types (e.g., 'Home Address has Postal Code', 'Home Address has Street Number', 'Home Address is located in Street'), Examples (e.g., 'The legal entity "Flemish Public Administration of Education" is located at the home Address "Koning Albert II-laan" with Street number "15" and Postal Code "1210"'), Notes (e.g., 'A valid Address is actually only an indication to stipulate that place. It is not a unique identification of a (cadastral) parcel, Legal Entity, or map position. Its purpose is to ease finding that place, and more importantly, to Address the location in order to increase the chance of successfully reaching it.'), and Synonyms (e.g., 'Locatie Vestigingsadres Client'). On the right side, there are sections for Actions (e.g., Add a Descrip..., Add a Definition..., Add a Note..., Add a Synonym..., Set Type...), Vocabulary Entry Information (e.g., Vocabulary: Home Address, Steward: Felix Van de Marie, Articulation Completeness: 62.5%, Concept type: Object Type), Stakeholders (e.g., There are no stakeholders. Click here to add one.), and Taxonomy (e.g., Address, Home Address, Specified Term). The bottom of the screen shows a footer with links like 'View in previous platform', 'Flemish Government', 'Collibra', and 'Collibra Home'.

Case: Flemish Public Administration

- Flanders Research Information Space program
- Virtual environment for research information
- Goals: central repository and lowering administrative burden of research institutions
- How: annotating existing databases and automatic linking of data (via conceptual identifiers)
- Use Business Semantics Management and Glossary to capture the knowledge and business rules in an ontology
- Transform the ontology in BSM/SBVR into RDFS/OWL, in turn linked with existing vocabularies
- Publish data gathered by FRIS as Linked Data on the Web, with D2R Server (<http://www4.wiwiss.fu-berlin.de/bizer/d2r-server/>)
- Annotate instances with exported ontologies
- Use business rules to automatically link data about

A screenshot of the Flemish Public Administration FRIS (Flanders Research Information Space) portal. The top navigation bar includes links for Help, Contact, About the Portal, News, Nederlands, and English. The main content area is titled 'Large Hadron Collider' and describes it as a European Organization for Nuclear Research. It highlights the Large Hadron Collider (LHC) as a gigantic scientific instrument near Geneva, where it spans the border between Switzerland and France. The LHC is 27 km in circumference and 100 m underground. It is a particle accelerator used by physicists to study the smallest known particles – the fundamental building blocks of all things. It will revolutionize our understanding from the minuscule world deep within atoms to the

The page features a network graph centered on the 'Large Hadron Collider'. Nodes include Cedric Lemaitre, Jan Heycock, Martine Thoen, Mans Van Leeuwen, Gertjan Buijten, Francois de Rose, Herbert Kozlak, Peter Hespel, Yves Vanden Aswede, Bartholomeus Vermeulen, and Jack Steinberger. Edges represent relationships, with one edge labeled 'Analysis of the top quark properties at the LHC accelerator'. To the right, there are sections for Content (listing users like Emanuele ABBOUDOUR TEFANI, Ahmed ABDELAHMAD, and others), Organisations (listing various particle physics organizations), and Research projects (listing projects like 'Analysis of the top quark properties at the LHC accelerator' and 'Experimental study of diffusive interfaces'). The bottom of the page includes copyright information for the Flemish Government and a footer with links to 'Presenting Economics, Science and Innovation for a better society', 'Copyright © 2008 Department of Economy, Science and Innovation, all rights reserved', 'Flemish Government', 'Department of Economy, Science and Innovation', 'Koning Albert II-laan 35 bus 10', '1000 Brussels, Belgium', 'E-mail: bsg@vub.be', and 'Collibra'.