

# OOOR Metadata Workshop - VI

## **Screen shots**

from

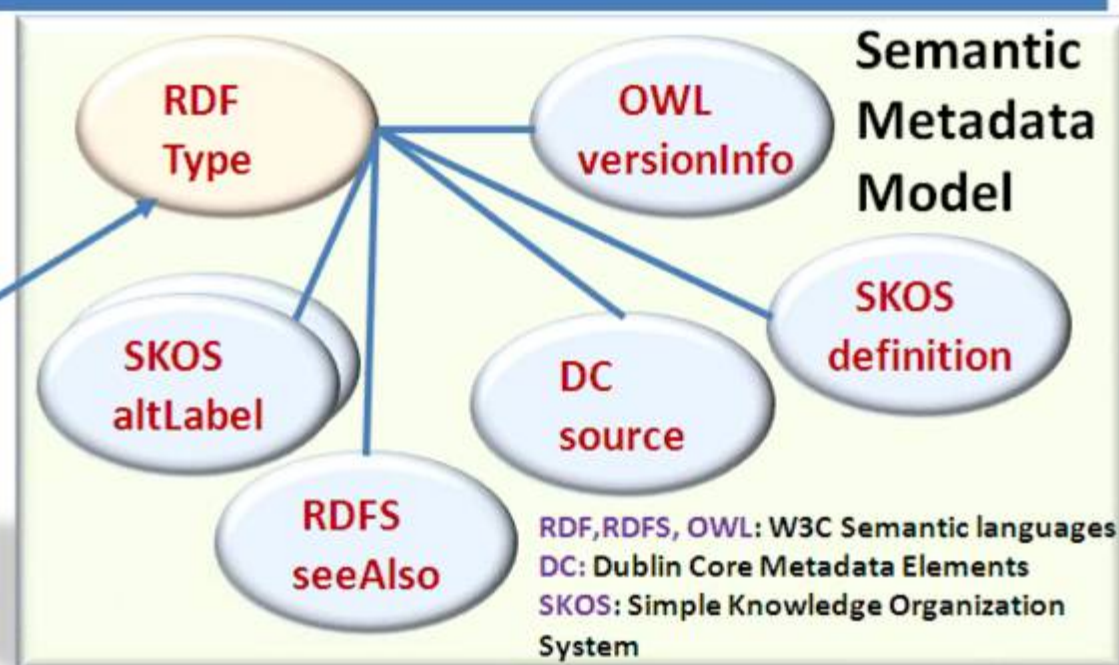
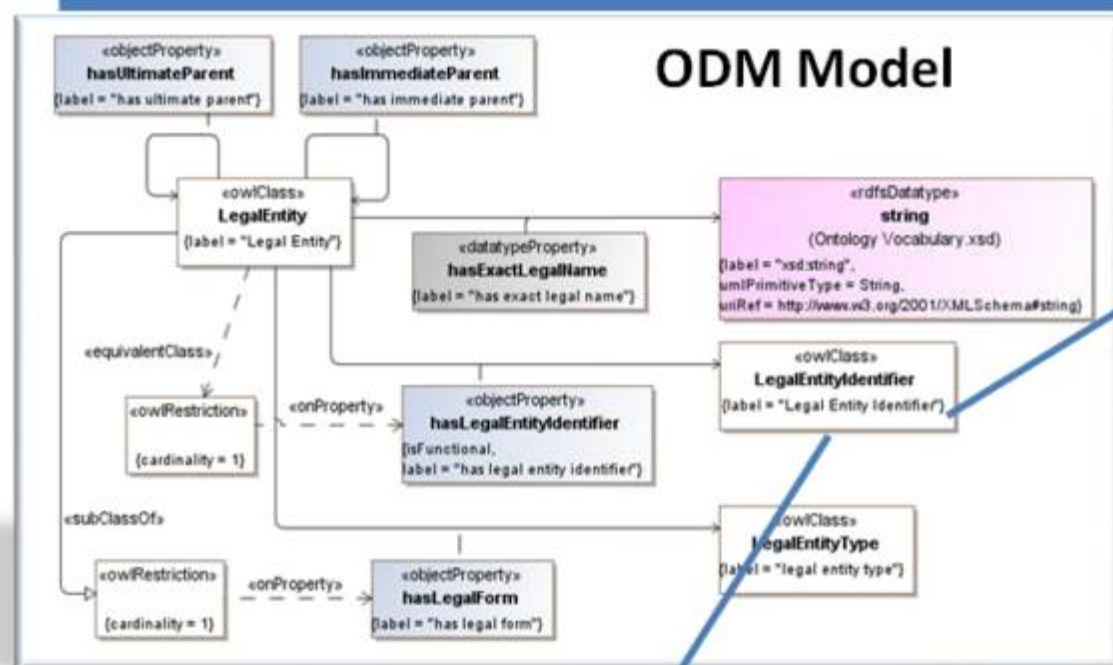
Presentation / Demo

by

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# Anatomy of a Semantic Data Standard



## Semantic Metadata

<b>rdf:type</b>	LegalEntityIdentifier
<b>skos:altLabel</b>	LEI
<b>skos:definition</b>	A legal entity identifier (LEI) is a unique ID associated with a single corporate entity SIFMA (Securities Industry and Financial Markets Association) overview discussion of Legal Entity Identifier ( <a href="http://www.sifma.org">http://www.sifma.org</a> )
<b>dc:source</b>	Version 1.0.0
<b>owl:versionInfo</b>	Office of Financial Research; Statement on Legal Entity Identification for Financial Contracts
<b>rdfs:seeAlso</b>	

## Community Access to Standards

- Multiple access options over the web via the authoritative standards body
- Hyperlink to semantic web standard from documents
- Community participation and interaction
- Query access via formal semantics repository including links and synonymous terms for knowledge
- Improved governance
- Provenance and evolution recorded
- Model files for download in multiple tools

Meaning, Not Words

# Semantic Financial Metadata

## Requirement #1: Define Uniform and Expressive Financial Data Standards

- ✓ Describes relationships among ontology elements and related data defined by financial institutions, regulatory authorities, standards organizations, etc.
- ✓ Provides:
  - Data Provenance, source and reference information
  - Cross-reference to data elements in related financial data standards, regulatory rules, business requirements and specifications e.g. FpML, CFTC rules, etc
- ✓ Intent is to provide web access to knowledge about financial data standards and requirements
  - Web Portal
  - Linked Open Data



Meaning, Not Words

interest-rate-swaps (http://www.edmcouncil.org/semanticrepository/ontologies/interest-rate-swaps.owl)

Active Ontology | Entities | Classes | Object Properties | Data Properties | Individuals | OWL Viz | DL Query | OntoGraf | Rules

Class hierarchy | Class hierarchy (inferred)

Class hierarchy: fcomm:Contract

- owl:Thing
  - derivatives-assets:AssetClass
  - fcomm:Adjustable\_Date
  - fcomm:Business\_Center
  - fcomm:Business\_Center\_Business\_Dates
  - fcomm:Business\_Day\_Calendar
  - fcomm:Business\_Day\_Convention
  - fcomm:Calculation
  - fcomm:Contract
    - contracts:Forwards\_Contract
    - contracts:Options\_Contract
    - contracts:Spot\_Contract
    - contracts:Swap\_Contract
      - irswap:Interest\_Rate\_Swap\_Contract
      - contracts:Swaptions\_Contract
    - fcomm:Contract\_Term
    - fcomm:Contract\_Terms\_Set
    - fcomm:Currency
    - fcomm:Currency\_Amount
    - fcomm>Date\_Adjustment
    - fcomm>Date\_Adjustment\_Scheme
    - fcomm:Financial\_Date

Description: fcomm:Contract

Equivalent classes +

Superclasses +

Inherited anonymous classes

Members +

Keys +

Disjoint classes +

Disjoint union of +

Annotations: fcomm:Contract

Annotations +

meta:definition  
"A contractually defined and established commitment to deliver some goods, perform some service or ma cash or in kind. ""xsd:string

meta:isIdentifiedBy  
"http://www.edmcouncil.org/semanticrepository/ontologies/financialcommon.owl#Contract""xsd:anyURI

Asserted in: <http://www.edmcouncil.org/semanticrepository/ontologies/financialcommon.owl>

Individuals by type | Annotation property hierarchy | Datatypes

Object property hierarchy | Data property hierarchy

Annotation property hierarchy:

- dc:creator
- dc:date
- dc:description
- dc:publisher
- dc:rights
- dc:source
- dc:title
- meta:isIdentifiedBy
- owl:backwardCompatibleWith
- owl:deprecated
- owl:incompatibleWith
- owl:priorVersion
- owl:versionInfo
- owlmeta:documentNumber
- owlmeta:documentURI

✓ Describes data definition standards

✓ Provides:

- Data Pr
- Cross-r regulat CFTC ru

✓ Intent is t about fin

- Web Po
- Linked

3/13/2012

Class hierarchy (inferred)

Class hierarchy: fcomm:Contract

- owl:Thing
  - derivatives-assets:AssetClass
  - fcomm:Adjustable\_Date
  - fcomm:Business\_Center
  - fcomm:Business\_Center\_Business\_Dates
  - fcomm:Business\_Day\_Calendar

Annotation property hierarchy

- dc:publisher
  - meta:publishedBy
- dc:rights
- dc:source
  - meta:adaptedFrom
  - meta:definitionOrigin
  - meta:termOrigin
  - meta:termOriginStandard
- dc:title
- meta:isIdentifiedBy
- owl:backwardCompatibleWith
- owl:deprecated
- owl:incompatibleWith
- owl:priorVersion
- owl:versionInfo
- owlmeta:documentNumber
- owlmeta:documentURL
- owlmeta:filename
- owlmeta:isNormative
- owlmeta:version
- rdfs:comment
- rdfs:isDefinedBy
- rdfs:label
- rdfs:seeAlso
- skos:altLabel
- skos:definition
- skos:prefLabel
- terms:abstract
- terms:creator
- terms:description
- terms:title

Description: fcomm:Contract

Equivalent classes +

Superclasses +

Inherited anonymous classes

Members +

Keys +

Disjoint classes +

Disjoint union of +

Annotations: fcomm:Contract

Annotations +

meta:definition  
"A contractually defined and established commitment to deliver some goods, perform some service or make some payment in cash or in kind."<sup>^^xsd:string</sup>

meta:isIdentifiedBy  
"http://www.edmcouncil.org/semanticrepository/ontologies/financialcommon.owl#Contract"<sup>^^xsd:anyURI</sup>

Class hierarchy (inferred)

Class hierarchy: contracts:Swap\_Contract

- owl:Thing
  - derivatives-assets:AssetClass
  - fcomm:Adjustable\_Date
  - fcomm:Business\_Center
  - fcomm:Business\_Center\_Business\_Dates
  - fcomm:Business\_Day\_Calendar
  - fcomm:Business\_Day\_Convention
  - fcomm:Calculation
  - fcomm:Contract
    - contracts:Forwards\_Contract
    - contracts:Options\_Contract
    - contracts:Spot\_Contract
    - contracts:Swap\_Contract**
      - irswap:Interest\_Rate\_Swap\_Contract
      - contracts:Swaptions\_Contract
    - fcomm:Contract\_Term
    - fcomm:Contract\_Terms\_Set
    - fcomm:Currency
    - fcomm:Currency\_Amount

Description: contracts:Swap\_Contract

Equivalent classes +

Superclasses +

- fcomm:Contract

Inherited anonymous classes

Members +

Keys +

Disjoint classes +

Disjoint union of +

Annotation property hierarchy

Object property hierarchy

Annotation property hierarchy: meta:governedByStandard

- meta:termOriginStandard
- dc:title
- meta:isIdentifiedBy
- owl:backwardCompatibleWith
- owl:deprecated
- owl:incompatibleWith
- owl:priorVersion
- owl:versionInfo
- owlmeta:documentNumber
- owlmeta:documentURL
- owlmeta:filename
- owlmeta:isNormative
- owlmeta:version
- rdfs:comment
  - meta:furtherNote
- rdfs:isDefinedBy
  - meta:governedByStandard

Annotations: contracts:Swap\_Contract

Annotations +

- meta:definition
 

"An exchange of streams of payments or other commitments over time according to specified terms."<sup>^^xsd:string</sup>
- meta:equivalentTo
  - contracts:ISDA\_FpML\_Swap
- meta:furtherNote
 

"The most common type is an interest rate swap, in which one party agrees to pay a fixed interest rate in return for receiving a adjustable rate from another party."<sup>^^xsd:string</sup>
- meta:isIdentifiedBy
 

"http://www.edmcouncil.org/semanticrepository/ontologies/derivatives-contracts.owl#Swap\_Contract"<sup>^^xsd:anyURI</sup>
- meta:termOrigin
  - org:EDMC
- rdfs:seeAlso
  - contracts:Swap\_Transaction

Class hierarchy (inferred)

Class hierarchy: irswap:Interest\_Rate\_Swap\_Contract

- fcomm:PartyIdentifier
- fcomm:Period**
- fcomm:Repeating\_Dates
- fcomm:Repeating\_Interval
- fcomm:Schedule
- fcomm:Schedule\_Frequency
- fcomm:Step
- fcomm:Time\_Period
- fcomm:Transaction
- iso1087-cpt:Concept
- iso1087-cpt:Designation
- iso3166:Country
- loc:Location
- meta:DataElement
- meta:Description**
- org:Organization
- org:Organization\_Type
- org:Organizational\_Contact
- org:Organizational\_Function

Annotation property hierarchy

Annotation property hierarchy: meta:governedByStandard

- meta:termOriginStandard
- dc:title
- meta:isIdentifiedBy
- owl:backwardCompatibleWith
- owl:deprecated
- owl:incompatibleWith
- owl:priorVersion
- owl:versionInfo
- owlmeta:documentNumber
- owlmeta:documentURL
- owlmeta:filename
- owlmeta:isNormative
- owlmeta:version
- rdfs:comment
  - meta:furtherNote
- rdfs:isDefinedBy
  - meta:governedByStandard**

Description: irswap:Interest\_Rate\_Swap\_Contract

Equivalent classes +

- contracts:has\_Swap\_Leg some fcomm:Interest\_Cashflow\_Terms\_Set**

Superclasses +

- contracts:Swap\_Contract**

Inherited anonymous classes

Members +

Keys +

Disjoint classes +

Disjoint union of +

Annotations: irswap:Interest\_Rate\_Swap\_Contract

Annotations +

- meta:definition**  
"A swap in which the underlying for one or both legs is an interest rate"<sup>^^xsd:string</sup>
- meta:isIdentifiedBy**  
"http://www.edmcouncil.org/semanticrepository/ontologies/interest-rate-swaps.owl#Interest\_Rate\_Swap\_Contract"<sup>^^xsd:anyURI</sup>
- meta:seeRegulatoryRule**
  - irswap:CFTC\_Rule\_45
- meta:seeRelatedDescription**
  - irswap:CFTC\_Interest\_Rate\_Swap\_Description
- meta:seeRelatedDescription**
  - irswap:ISDA\_Interest\_Rate\_Swap\_Description