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ONTOLOGÍAS EN LA WEB

5. RDF SCHEMA (RDFS)

YASGUI: YET ANOTHER SPARQL GUI

- ▶ Editor textual de SPARQL online
- ▶ Utilizable con cualquier SPARQL endpoint
- ▶ Tecnología client, pero tiene server para usarlo de proxy
- ▶ Queries salvadas en el local storage del browser
- ▶ Control de sintaxis, colores, autocompletamiento

ACTIVIDAD: SPARQL

- Desde YASGUI probar alguna query:
 - ▶ sobre DBpedia (<http://dbpedia.org/sparql>)
 - ▶ sobre DBpedia Live (<http://live.dbpedia.org/sparql>)
 - ▶ sobre WikiData (<https://query.wikidata.org/bigdata/namespace/wdq/sparql>)
 - ▶ sobre Dydra

REFERENCIAS PARA ESTA CLASE (RDFS)

- ▶ Caps. 6 y 7 de "Semantic for the Working Ontologist"
- ▶ [W3C RDF 1.1 Schema](#)
- ▶ Semantic University: [RDFS Introduction](#)

CLASES FUNDAMENTALES RDFS

- ▶ **rdfs:Resource**
clase de todas las cosas en RDF (es instancia de rdfs:Class)
- ▶ **rdfs:Class**
clase de las clases (es instancia de si misma)
- ▶ **rdfs:Literal**
clase de los literales (es instancia de rdfs:Class)
- ▶ **rdf:Property**
clase de todas la propiedades (es instancia de rdfs:Class)

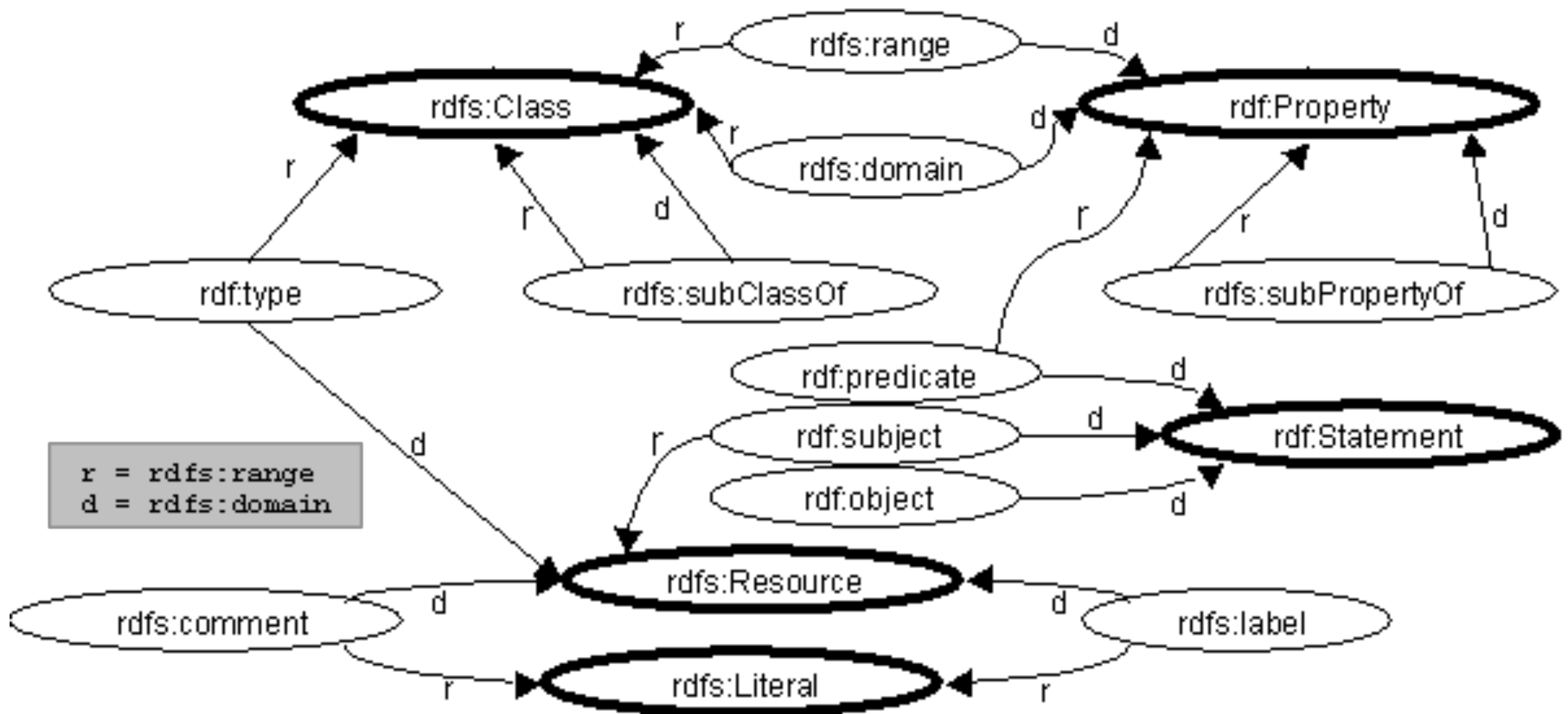
PROPIEDADES FUNDAMENTALES RDFS

- ▶ **rdf:type** (rdfs:Resource → rdfs:Class)
asocia un recurso a uno de sus tipos
- ▶ **rdfs:subClassOf** (rdfs:Class → rdfs:Class)
asocia una clase a una de sus super-clases
- ▶ **rdfs:domain** (rdf:Property → rdfs:Class)
asocia una propiedad a su dominio
- ▶ **rdfs:range** (rdf:Property → rdfs:Class)
asocia una propiedad a su codominio
- ▶ **rdfs:subPropertyOf** (rdf:Property → rdf:Property)
asocia una propiedad a una de sus super-propiedades

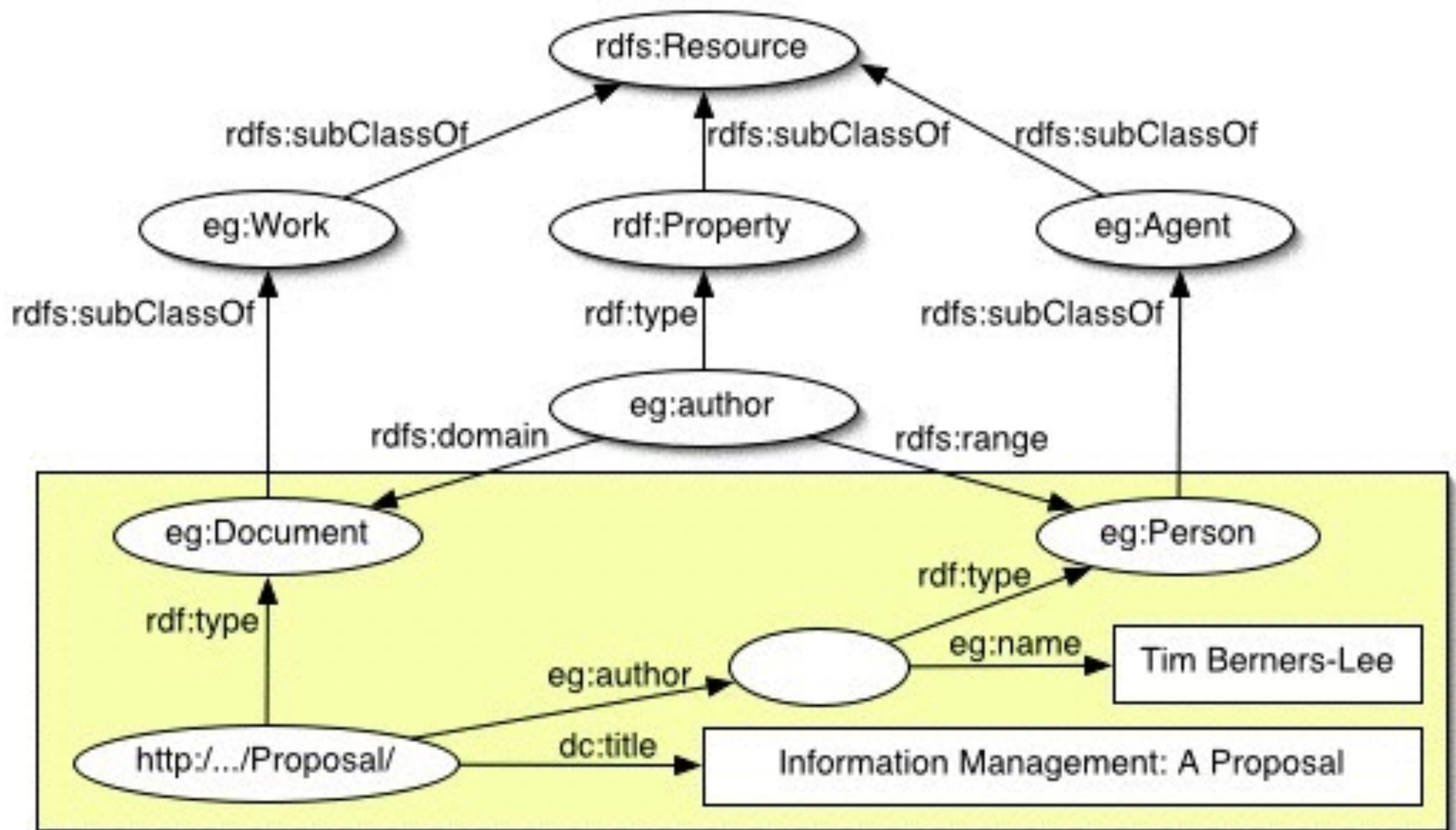
MÁS PROPIEDADES RDFS

- ▶ **rdfs:label** (rdfs:Resource → rdfs:Literal)
asocia un recurso a su(s) nombre(s)
- ▶ **rdfs:comment** (rdfs:Resource → rdfs:Literal)
asocia un recurso a su(s) descripción(es)

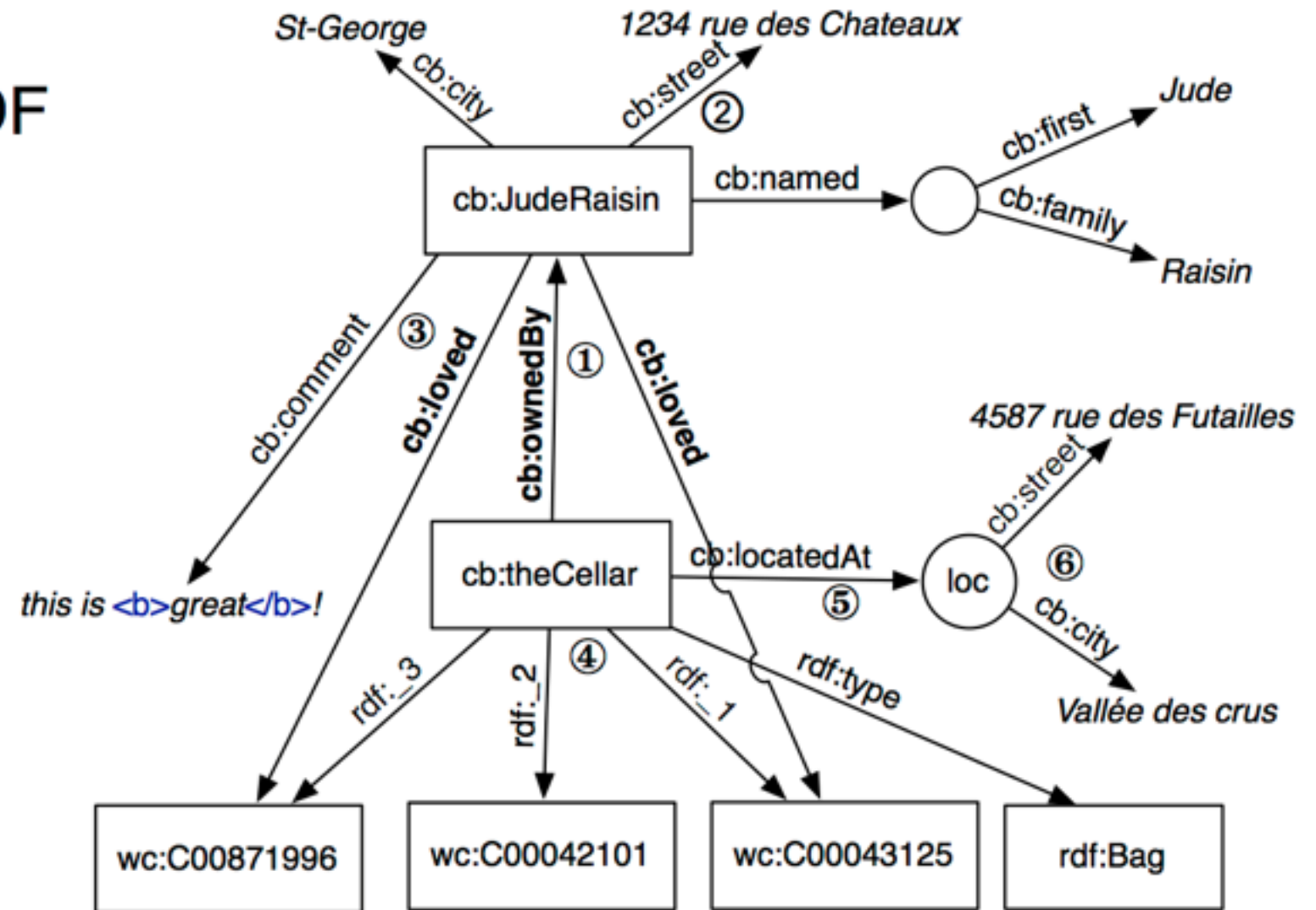
RELACIONES ENTRE CLASES Y PROPIEDADES RDFS



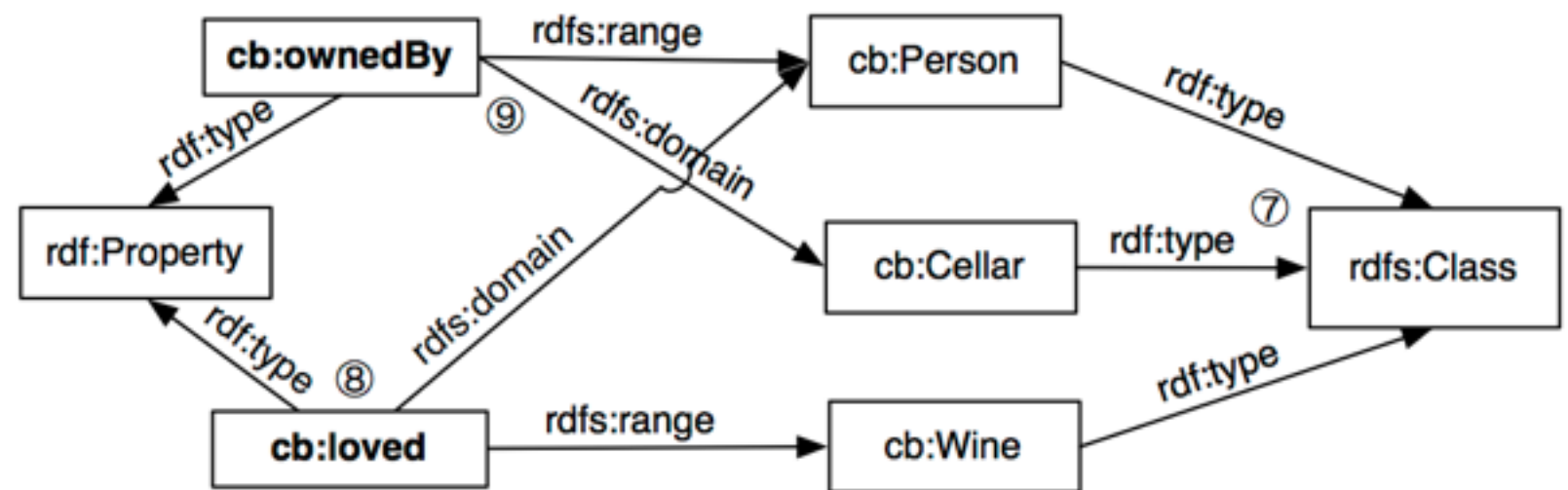
EJEMPLOS 1



EJEMPLOS 2



RDF-S



Resource

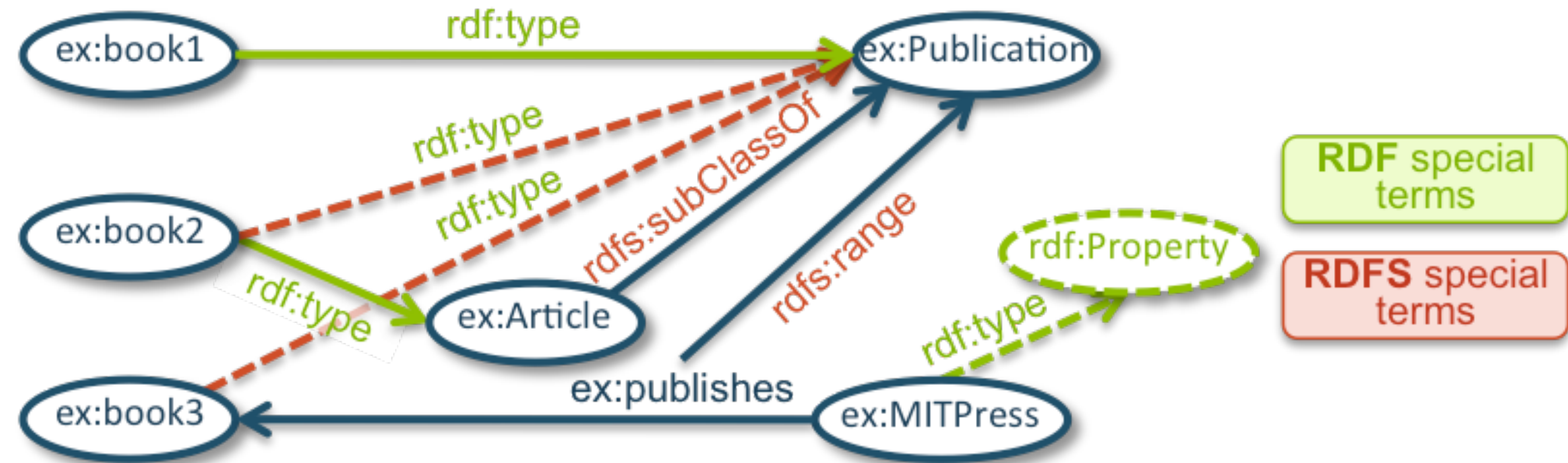


Blank node

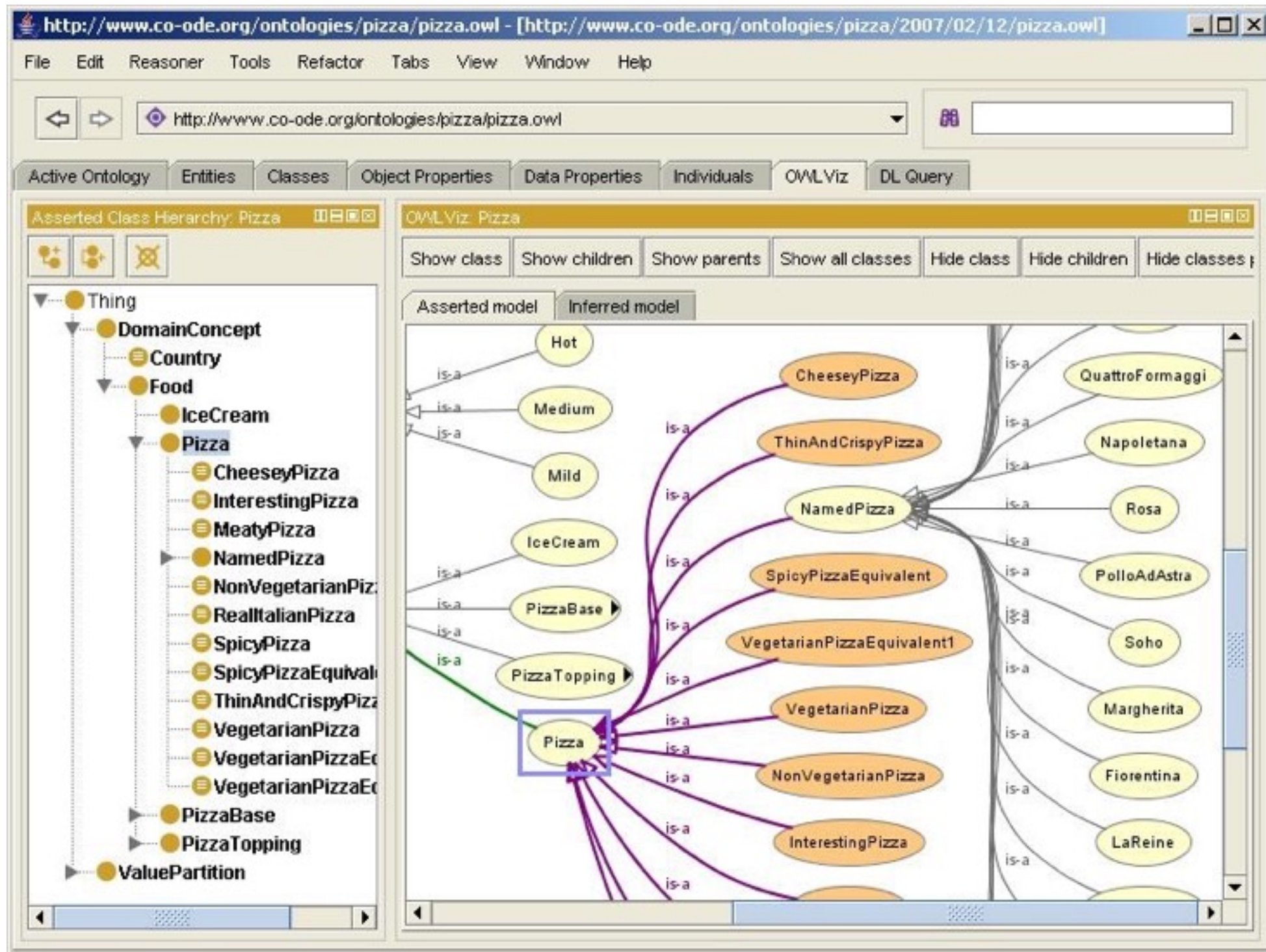


String value

INFERENCIA



PROTÉGÉ: EDITOR DE ONTOLOGÍAS



WEB PROTÉGÉ: EDITOR DE ONTOLOGÍAS COLABORATIVO

The screenshot displays the WebProtégé web application interface. At the top, the Protégé logo is on the left, and user information 'ttania' and a 'Help' button are on the right. Below this is a tabbed interface with tabs for 'WebProtégé', 'Chicken Anatomy', 'DBPedia 3.9', and 'Gene Ontology'. A secondary row of tabs includes 'Classes', 'Properties', 'Individuals', 'Notes and Discussions', 'Changes By Entity', and 'Project Dashboard'. The main workspace is divided into three panels:

- Classes Panel:** Located on the left, it shows a hierarchical tree of classes. The 'cellular_component' class is expanded, revealing a list of subclasses including 'annulate lamellae', which is currently selected.
- Class description for annulate lamellae Panel:** The central panel displays the details for the selected class. It includes:
 - Display name:** annulate lamellae
 - IRI:** http://purl.obolibrary.org/obo/GO_0005642
 - Annotations:**
 - `rdfs:label`: annulate lamellae
 - `id`: GO:0005642
 - `definition`: Stacks of endoplasmic reticulum (ER) membranes containing a high density of nuclear pores, thought to form from excess nuclear membrane components, that have been described in a number of different cells. Annulate lamellar membranes are continuous with and embedded within the ER.
 - `has_obo_namespace`: cellular_component
 - Properties:**
 - `part_of`: nuclear outer membrane-endoplasmic reticulum membrane network
- Discussions for annulate lamellae Panel:** Located on the right, it contains a 'Post new topic' button.

At the bottom right, there is a 'Project feed' panel.

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