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The European Language Grid has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement № 825627 (ELG).



coreon

Knowledge meets language.

Customer Benefits



Biz: E-Commerce

Customers find products: Revenue!



Enterprise: Global Champions

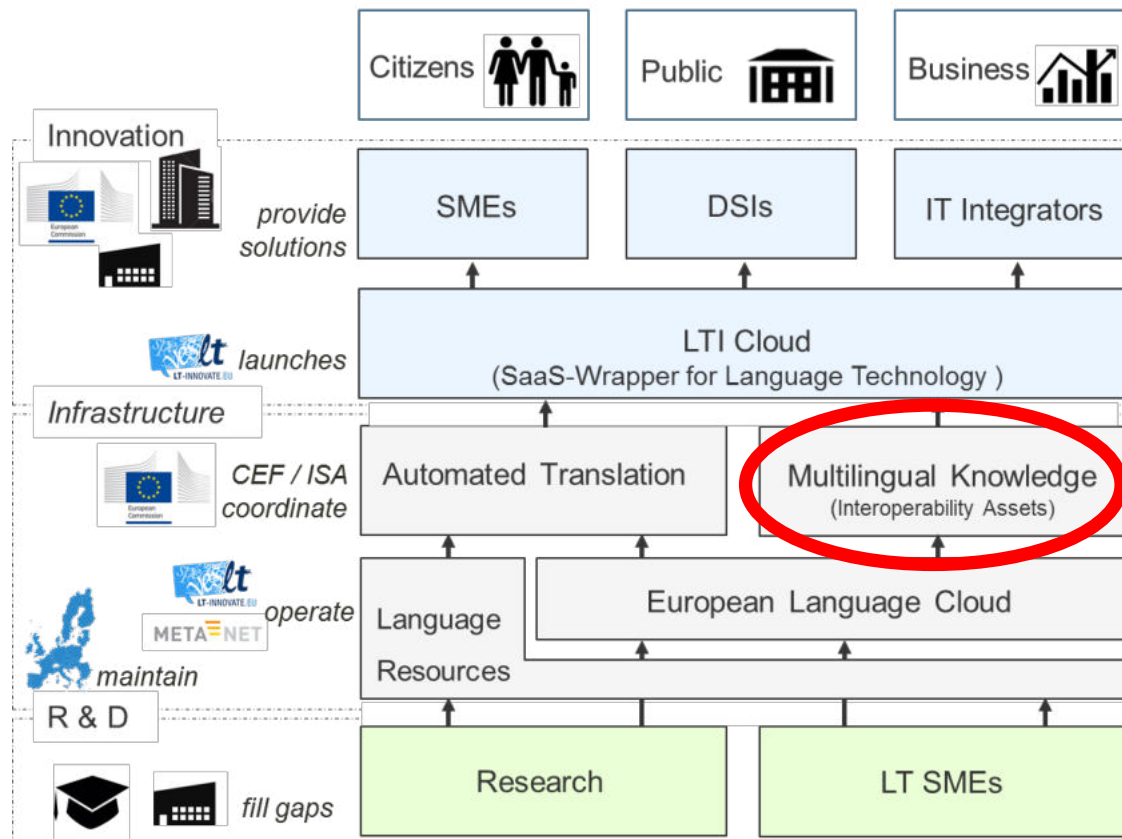
Optimized global biz processes: Savings!



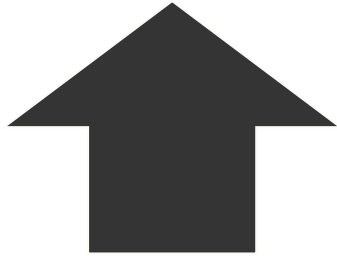
eGov: Interoperability

Information exchange: Efficiency!

ELG Predecessor LTI Cloud (2015-2016)

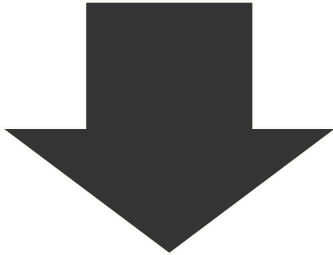


The Problem



Knowledge Graphs:
SPARQL & RDF

- Not appropriate neither designed for multilingual, richly described terminology



Termbases:
Proprietary APIs or TBX files to send around

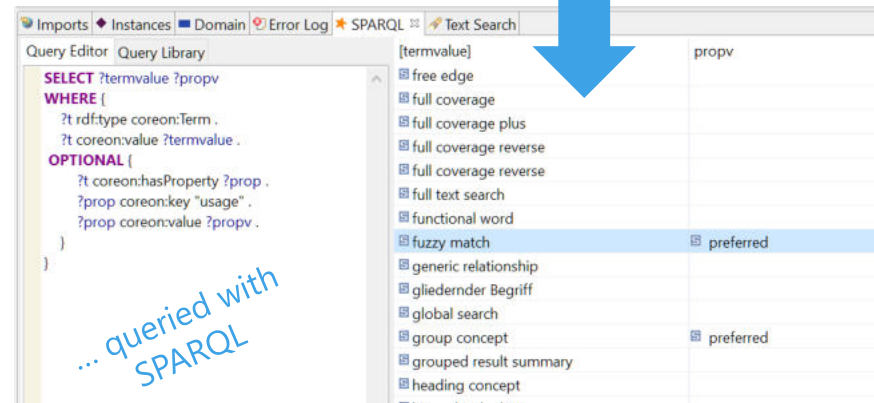
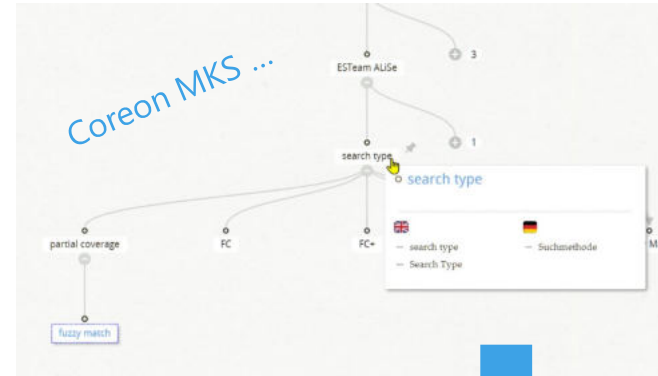
- Not for the Semantic Web
- Tedious exporting / re-modeling, deploy and import RDF triple store

Lost opportunity to leverage terminology data for Semantic Web solutions

The Solution – ELG Project MKS2LLOD

Multilingual Knowledge Systems as Linguistic Linked Open Data

- Instead of using Coreon's proprietary APIs, achieve **high efficiency for developers** by complementing MKS with standards known from LLOD (Linguistic Linked Open Data)
- Enable companies and institutions make their MKS (= semantic interoperability assets) discoverable and **available through ELG**
- Develop and **complement Coreon with a SPARQL interface**, API key based authentication
- **ELG to be a gateway** to the SPARQL endpoint = become a platform for the multilingual semantic web

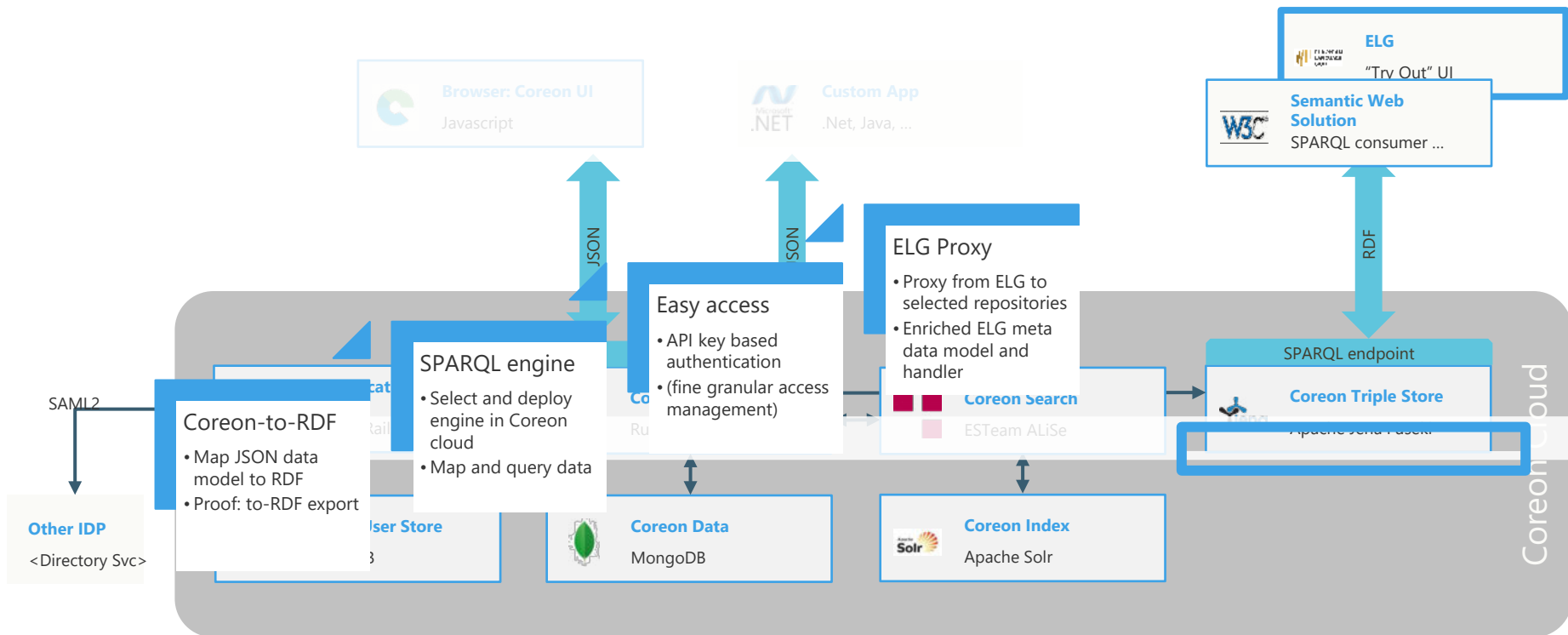


... queried with SPARQL

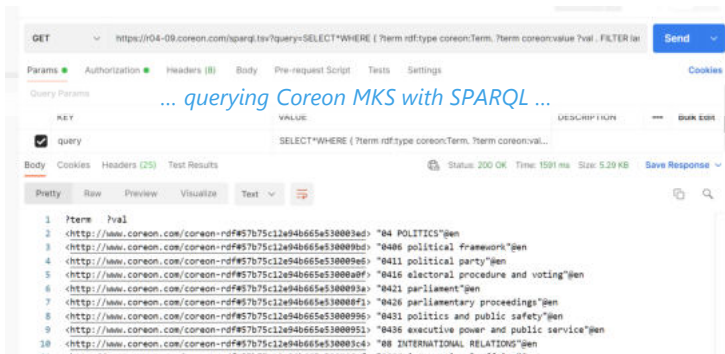
```
SELECT ?termvalue ?propv
WHERE {
  ?t rdf:type coreon:Term .
  ?t coreon:value ?termvalue .
  OPTIONAL {
    ?t coreon:hasProperty ?prop .
    ?prop coreon:key "usage" .
    ?prop coreon:value ?propv .
  }
}
```

[termvalue]	propv
<input type="checkbox"/> free edge	
<input type="checkbox"/> full coverage	
<input type="checkbox"/> full coverage plus	
<input type="checkbox"/> full coverage reverse	
<input type="checkbox"/> full coverage reverse	
<input type="checkbox"/> full text search	
<input type="checkbox"/> functional word	
<input checked="" type="checkbox"/> fuzzy match	<input checked="" type="checkbox"/> preferred
<input type="checkbox"/> generic relationship	
<input type="checkbox"/> gliedender Begriff	
<input type="checkbox"/> global search	
<input type="checkbox"/> group concept	<input checked="" type="checkbox"/> preferred
<input type="checkbox"/> grouped result summary	
<input type="checkbox"/> heading concept	

Building Block, Activities, and Milestones



MKS2LLOD: Dilemma Resolved, Objectives Achieved



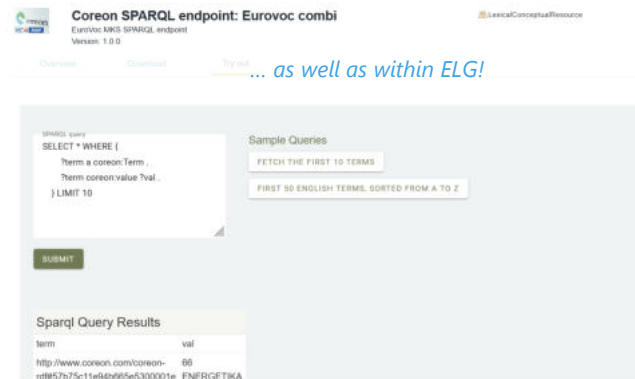
```
GET https://r04-09.coreon.com/sparql/?v=query=SELECT*WHERE%20%7B%20?term%20rdf:type%20coreon:Term,%20?term%20coreon:value%20?val%20.%20FILTER%20(lang(?term)%20=%20%27en%27)%20.%20%7D%20.%20
```

Query Params

KEY	VALUE
query	SELECT * WHERE { ?term rdf:type coreon:Term, ?term coreon:value ...

Body

```
1 ?term ?val
2 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e30003ed> "04 POLITICS"@en
3 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e30009bd> "0486 political framework"@en
4 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e30009e5> "0411 political party"@en
5 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e30009f9> "0416 electoral procedure and voting"@en
6 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e300093a> "0421 parliament"@en
7 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e30008f1> "0426 parliamentary proceedings"@en
8 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e3000956> "0431 politics and public safety"@en
9 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e3000951> "0436 executive power and public service"@en
10 <http://www.coreon.com/coreon-rdf#57b75c12a94b665e30003c4> "08 INTERNATIONAL RELATIONS"@en
```



Coreon SPARQL endpoint: Eurovoc combi

as well as within ELG!

Sample Queries

FETCH THE FIRST 10 TERMS

FIRST 50 ENGLISH TERMS, SORTED FROM A TO Z

Sparql Query Results

term	val
http://www.coreon.com/coreon-rdf#57b75c11e94b665e300001e	ENERGETIKA

Familiar

Query terminology with the syntax known from the Semantic Web

Real-time

No need to export, mirror into, nor to deploy a separate triple store

Findable

Promoted and shown on the ELG hub

Shared

Best practices and learnings feed into an ISO Technical Recommendation

Make Terminology Resources a Component of the Semantic Web

ELG Experience



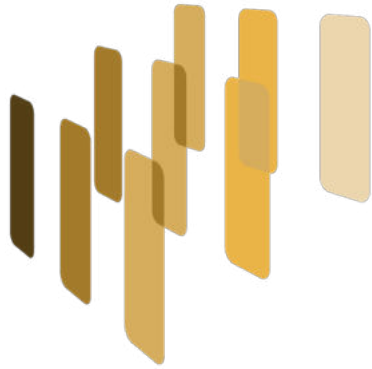
- Well designed
 - Duration
 - Budget
 - Funding
 - Consortium not required
- Efficient application process
 - Well structured
 - Pragmatic, focus on essentials
 - Produced a flexible, draft project plan
- Fast, transparent award
- Great “project officers”
 - Competent & knowledgeable
 - Problem solving & guidance
 - True coaches
- Reporting & Acceptance
 - Fun sharing and learning event
 - Useful Feedback
 - No delays

Coreon Benefits



- Exposure on ELG
- Standardized access to repositories
- Attractiveness for new market segments
- Knowledge gain
- Extend capabilities
- Enlarged option space

ELG Benefits



- Successful project
- Great industry collaboration
- Pilot linguistic linked open data
- Infrastructure for multilingual knowledge
- Showcase for language support for data spaces



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