



Publications Office
of the European Union

Questions and Answers Demo

by



June 2022



Agenda

- Intro to Pureinsights
- The Challenge
- Demonstration

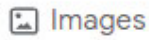




- Founded 2020
- Decades of search experience
- Search, ML, NLP & Knowledge Graphs
- Focus on Q & A
- Technology Independent
- Asset Development (Data Engineering Platform)



how many queries per second does google get?



Tools

About 42,800,000 results (0.65 seconds)

Google doesn't share its search volume data. However, it's estimated Google processes approximately **63,000 search queries every second**, translating to 5.6 billion searches per day and approximately 2 trillion global searches per year. The average person conducts between three and four searches each day. 9 Jun 2021

[https://blog.hubspot.com/marketing/google-search-stat...](https://blog.hubspot.com/marketing/google-search-statistics)

25 Google Search Statistics to Bookmark ASAP - HubSpot Blog

About featured snippets • Feedback

People also ask

How many queries per second does Gmail get Google?

How many queries does Google get a day?

How many questions are asked on Google a second?

How many queries does Google get a year?

Feedback

Since 2017 **Questions and Answers** has grown to approximately **16%** of ALL queries handled by Google

Publications Office of the EU

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Search results

Apply Filters

- Collection:
 - EU law (82338)
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- Corporate author(s):
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 - Advisory Committee on Restrictive Practices and Dominant Positions (4)
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- Document format:
 - PDF (121011)
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- Document year:
 - 2023 (5)
 - 2022 (2)
 - 2021 (2555)
 - 2020 (6212)
 - 2019 (6529)

Save search Create alerts RSS Widget: embed results Print

"What is the global annual profit from trafficking humans ?" returned 135476 results

EU law x EU publications x EU official directory x Web pages x Summaries of EU legislation x

Sort by Relevance View 10 per page

Study on the economic, social and human costs of trafficking in human beings within the EU

The purpose of the Study is to measure the cost of **trafficking in human beings** in the European Union. **Trafficking in human beings** is a particularly serious crime, driven by **profits** and involves a chain of actors who are knowingly or unknowingly involv...

Published: 2020-10-16

Subject: [trafficking in human beings](#), [access to the courts](#), [child protection](#), [European Union](#), [fight against crime](#), [help for victims](#), [policymaking](#), [report](#), [rights of the individual](#), [sexual violence](#), [slavery](#), [victim](#), [woman](#)

[Author](#)

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Implementation of Directive 2011/36/EU Migration and gender issues : European implementation assessment

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Published: 2020-09-30

Subject: [human rights](#), [trafficking in human beings](#), [directive \(EU\)](#), [EU Member State](#), [gender equality](#), [help for victims](#), [migration](#)

[Author](#)

EU publications PDF Permanent link

Ms Sofie FROM-EMMESBERGER
Director

Ms E. VOYNOVA
Policy Officer - on trafficking in human

Ms Paola CASADEI
Head of Human Resources Unit



"The Challenge"

Users are starting to expect this interaction on ALL search engines

how old is ursula von der leyen ?



All News Images Shopping Videos More Tools

About 23,700,000 results (0.70 seconds)

Ursula von der Leyen / Age

63 years

8 October 1958

One Answer



People also search for



Heiko von der Leyen
66 years



Charles Michel
46 years



Josep Borrell Fontelles
75 years

Feedback

People also ask

Is Ursula von der Leyen a doctor?



Who is the EU chief?



Feedback

https://en.wikipedia.org/wiki/Ursula_von_der_Leyen

Knowledge Graph Answer

Answer is from Metadata

where does ursula von der leyen live?

All News Images Videos Shopping More Tools

Ursula von der Leyen / Places lived

| | | | | | | |
|--|---|--|--|--|---|--|
|  <p>Hanover</p> |  <p>Stanford 1992–1996</p> |  <p>Göttingen</p> |  <p>Lehrte</p> |  <p>Ixelles 1958–1971</p> |  <p>London</p> |  <p>Münster</p> |
|--|---|--|--|--|---|--|



Feedback

<https://www.vogue.co.uk> > ... > Arts & Lifestyle

5 Things You Need To Know About Ursula von der Leyen, The ...

27 Apr 2021 — Currently, **von der Leyen** sleeps in a small studio adjoining her office at the Commission HQ rather than making a home in Brussels. Instead, she ...

People also ask

- Where does the President of the European Commission live?
- Where is von der Leyen from?
- Who is Ursula von der Leyen husband?

Feedback

Ursula von der Leyen

President of the European Commission



Ursula Gertrud von der Leyen is a German and European Union politician who has been President of the European Commission since 1 December 2019. She served in the German federal government from 2005 to 2019, holding successive positions in Angela Merkel's cabinet, most recently as minister of defence. [Wikipedia](#)

Born: 8 October 1958 (age 63 years), Ixelles,

About 2,370,000 results (0.62 seconds)

Ursula Gertrud von der Leyen (German: [ˈʊʁzula ˈɡeːʁtʁuːt fɔn de ˈlaɪən] (listen); née Albrecht; born 8 October 1958) is a German and European Union politician who has been president of the European Commission since 1 December 2019.

https://en.wikipedia.org/wiki/Ursula_von_der_Leyen ⋮

[Ursula von der Leyen - Wikipedia](#)

? About featured snippets • ! Feedback

People also ask ⋮

Who was the first President of the European Union? ▼

What is the name of the President of Europe? ▼

Who are the 5 presidents of the EU? ▼

Who are the 27 EU leaders? ▼

Feedback

https://en.wikipedia.org/wiki/Von_der_Leyen_Commission ⋮

[von der Leyen Commission - Wikipedia](#)

Selection of the candidate for **president** — It has **Ursula von der Leyen** as its **president** and it further consists of one commissioner from each of the member ...

[Election and formation](#) · [Commission departments](#) · [Selection of the candidate for...](#)

Extractive Answers / Featured Snippets

Answer is embedded deep within
the content

It is not in the Knowledge Graph.

Publications Office of the EU

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- Body of European Regulators for Electronic Communications (11)
- Advisory Committee on Restrictive Practices and Dominant Positions (4)
- ACP-EU Committee of Ambassadors (1)
- Customs Cooperation Committee (19)

more...

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"What is the global annual profit from trafficking humans ?" returned 135476 results

EU law x EU publications x EU official directory x Web pages x Summaries of EU legislation x

Sort by Relevance View 10 per page



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Published: 2020-10-16

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Author

EU publications

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Author

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PDF Permanent link

Ms Sofie FROM-EMMESBERGER Director

Ms E. VOYNOVA Policy Officer - on trafficking in human

Ms Paola CASADEI Head of Human Resources Unit



Search results

Search results

Apply Filters

Collection:

- EU law (108914)
- EU publications (83629)
- Summaries of EU legislation (1190)
- Web pages (19)
- EU official directory (1040)

Corporate author(s):

- Authority for European Political Parties and European Political Foundations (3)
- Body of European Regulators for Electronic Communications (11)
- Advisory Committee on Concentrations (1)
- Advisory Committee on Restrictive Practices and Dominant Positions (3)
- EC-Switzerland Inland Transport Committee (8)

Document format:

- PDF (168086)
- PRINT (90467)
- HTML (57600)
- DOC (11407)
- EBOOK (1019)

Save search Create alerts RSS Widget: embed

environment returned 177518 results

EU law x EU publications x EU official directory x Web pages x

Sort by Relevance View 10 per page List

Environment
Latest edition.
The EU has some of the world's highest environmental life, green the economy and achieve careful and rational use of natural resources. Union: What it is and what it does'....
Published: 2020-10-26
Subject: [environmental protection](#), [EU environmental awareness campaign](#), [quality of the environment](#), [sustainable development](#)
Author v

EU publications

Environment
There is a newer edition of this publication
The EU has some of the world's highest environmental life, green the economy and achieve careful and rational use of natural resources. Union: What it is and what it does'....
Published: 2019-09-12
Subject: [conservation of resources](#), [ecology](#), [environmental policy](#), [EU Member State](#), [environmental protection](#)
Author v

EU publications

EU Whoiswho

Publications Office assistant [Close]

what;s your best inforamtion on human rights? Just now

I found 326197 documents

Thanks, would you like to see some relevant documents?

Human rights

Published: 2022-02-09

Human rights

Published: 2021-05-28

Human rights cities in the EU : a framework for reinforcing rights locally : report.

This report proposes a framework for becoming, and functioning as, a 'human rights city' in the EU. It includes...

Published: 2021-10-11

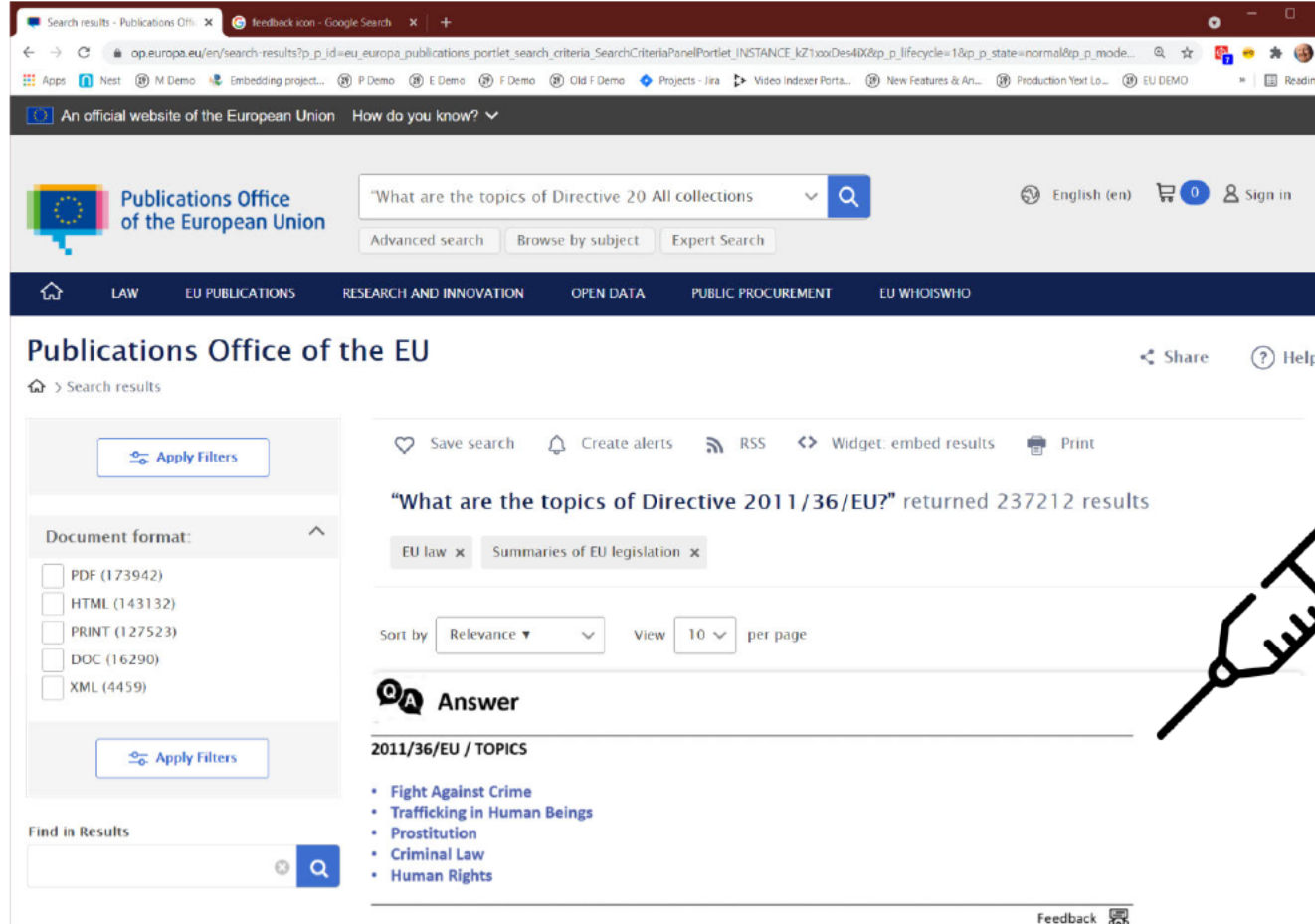
Person identification, human rights and ethical principles : rethinking biometricsin...

As the use of biometrics becomes commonplace in the era of artificial intelligence (AI), this study aims to...

Published: 2022-02-02

See all results





The screenshot shows the search results page on the Publications Office of the EU website. The search query is "What are the topics of Directive 2011/36/EU?". The results are filtered by "EU law" and "Summaries of EU legislation". The search results are sorted by "Relevance" and displayed in a "10 per page" view. A "Knowledge Graph Answer" section is visible, listing the following topics: "Fight Against Crime", "Trafficking in Human Beings", "Prostitution", "Criminal Law", and "Human Rights". Below the answer, there are two search results listed, each with a "Feedback" icon and a "Permanent link" option.



**Knowledge Graph
Answer injected
by our service**

Knowledge Graph Answer

Question

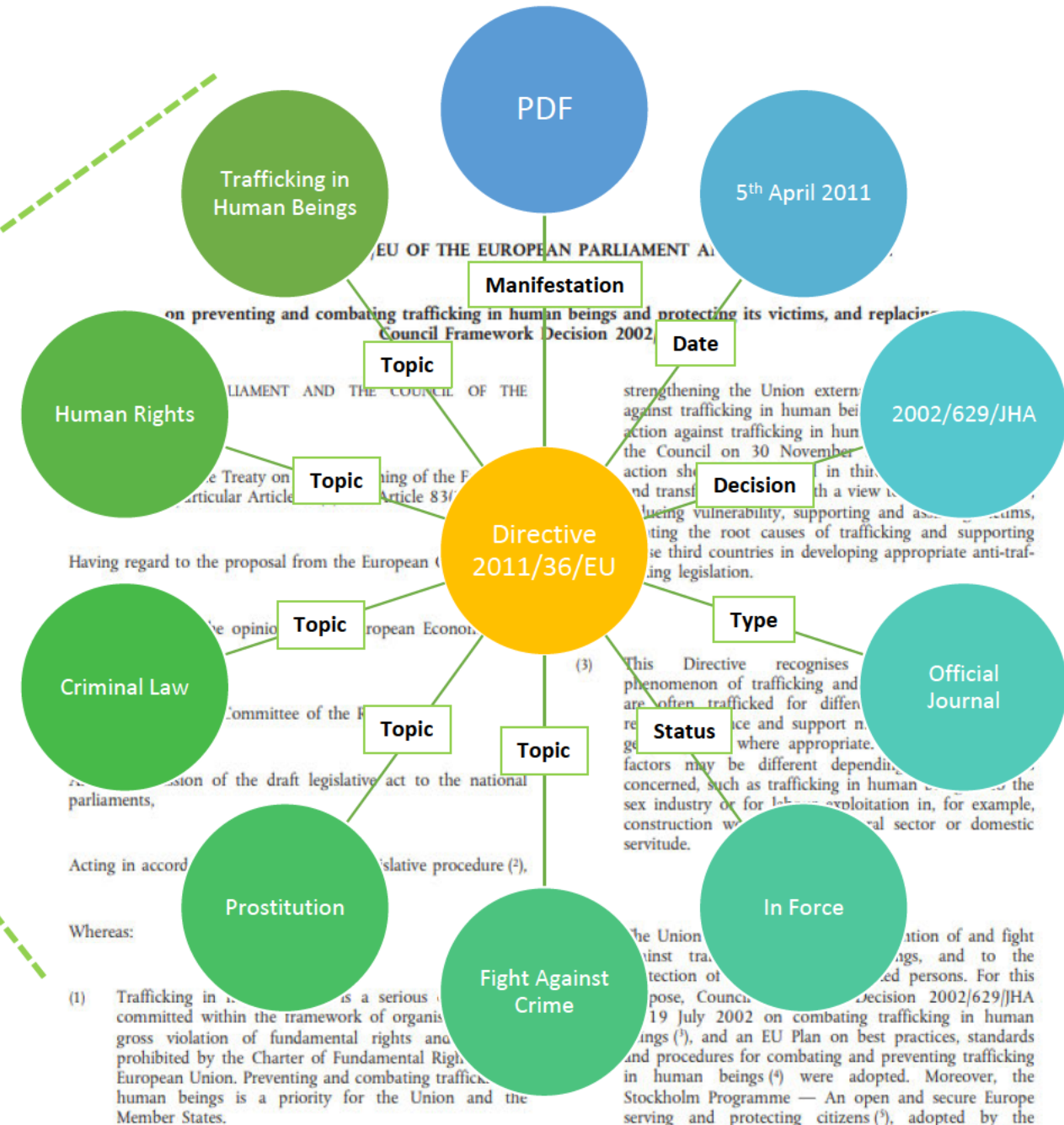
“What are the topics of Directive 2011/36/EU?”

Answer

2011/36/EU / TOPICS

- Fight Against Crime
- Trafficking in Human Beings
- Prostitution
- Criminal Law
- Human Rights

Feedback



Publications Office of the EU

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Save search | Create alerts | RSS | Widget: embed results | Print

"What is the global annual profit from trafficking humans ?" returned 135476 results

EU law x | EU publications x | EU official directory x | Web pages x | Summaries of EU legislation x

Sort by Relevance | View 10 per page

Answer

EUR 29.4 billion

"Trafficking in human beings is a highly profitable crime that brings enormous profit to the criminals while incurring a tremendous cost to society. The estimated global annual profit from trafficking in human beings amounts to **EUR 29.4 billion** (conservative estimate)..."

Source :

About Featured Snippets | Feedback



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Extractive Answer injected by our service

Featured Snippets / Extractive Answers

Question

“What is the global annual profit from trafficking humans ?”

Answer

EUR 29.4 billion

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About Featured Snippets | Feedback

Most likely answer generated by “Google BERT”

I. Introduction

Protecting society from organised crime, and in particular tackling trafficking in human beings, is a priority under the new EU security union strategy¹. Article 20 of Directive 2011/36/EU² (‘Anti-trafficking Directive’) foresees a two-yearly report on the progress made in the fight against trafficking in human beings.

Trafficking in human beings is a highly profitable crime that brings enormous profit to criminals while incurring a tremendous cost to society. The estimated global annual profit from trafficking in human beings amounts to EUR 29.4 billion³ (conservative estimate). The total cost of trafficking in the EU in a single year is estimated at EUR 2.7 billion. This is due to additional services in the area of law enforcement, health and social protection, lost economic output, lost quality of life and the co-ordination of anti-trafficking activities⁴. Such costs are triggered by the serious violation of fundamental rights of women, men, girls and boys by traffickers and continue to be borne by our societies as human trafficking persists.

Criminals have seized the opportunities during the Covid-19 pandemic to generate significant profits and intensify criminal activities. They have changed their operating methods and are increasingly advertising victims on the internet or exploiting them in private facilities. While the full impact of the pandemic is not yet measurable, it is clear that the crisis has given rise to extraordinary challenges, disproportionately affecting the most vulnerable, exacerbating people’s vulnerability to trafficking in human beings, including those of women and children. Civil society organisations, international organisations and EU agencies have voiced concerns about delays in identifying victims, which hinders their access to justice, assistance and support⁵.

Best “section” of best document identified by Cosine Similarity of BERT Vectors

Extract

Featured Snippets / Extractive Answers

Question

“What is the global annual profit from trafficking humans ?”

Answer

EUR 29.4 billion

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Unfortunately affecting the trafficking in human beings, organisations, international efforts in identifying victims,

Best “section” of best document identified by Cosine Similarity of BERT Vectors

Extract

Model is a “generic” understanding model. It has NOT been fine tuned on Legal or European Union specific Language

Home



Law

EU law, national law and related information



European data

Datasets from the European countries and the EU institutions



Public procurement

Business opportunities in the European Union and beyond



EU Publications

The publications of the EU institutions in various formats



Research & Innovation

Information about the results of EU-funded projects



EU Whoiswho

The directory of the European Institutions

RESOURCES



EU Vocabularies

EU reference data and resources for knowledge management.



EU Web archive

Archive of websites of EU institutions and agencies.



Librarian's corner

Metadata services and European Commission Library resources.

Home



Law

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Research & Innovation

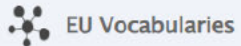
Information about the results of EU-funded projects



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RESOURCES



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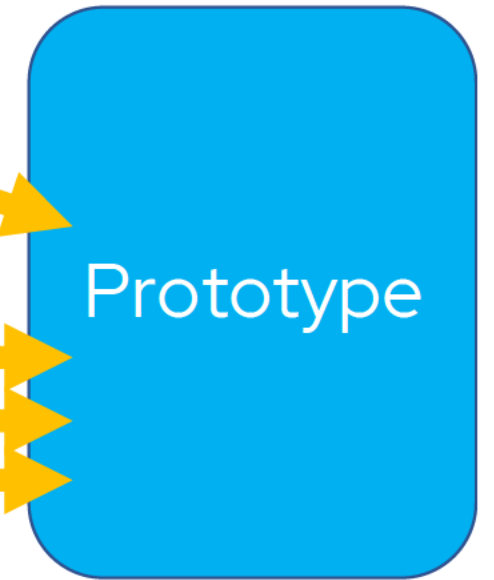
EU Web archive

Archive of websites of EU institutions and agencies.



Librarian's corner

Metadata services and European Commission Library resources.

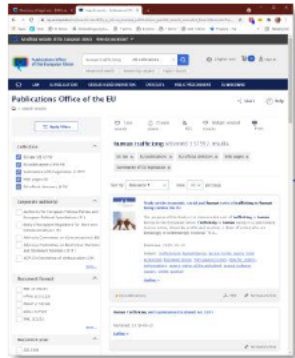


Questions and Answers Proof of Concept



- Euro Law in Force
- Who is Who

English, French content only



Question or Query Keywords

Inject Answer

Existing OP Portal Query Processor

Question

Answer

Query Keywords

Existing OP Portal Elasticsearch

Elastic Dump

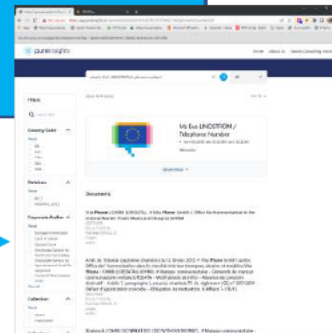
Taken Late Jan 2022

Pending Task: **Data Refresh**

Questions and Answers Query API

JSON Query

JSON Response



Mock up UI

Questions and Answers Services

- SPECIALISED DATA CACHE
- LANGUAGE IDENTIFIER
- TEXT UNDERSTANDING
 - FOR QUERIES and DOCUMENTS
 - NLP
 - TEXT PARSE TREES
 - ENTITY RECOGNITION
 - FIELD MAPPER
 - BERT VECTORS
- ANSWER ALGORITHM
 - KNOWLEDGE GRAPH ANSWERS
 - FEATURED SNIPPETS
- ANSWER RESPONSE

Note: Some of the services utilized here for Text Understanding may utilize existing components deployed by the Chatbot project earlier in 2020. This needs to be determined during project execution.

DEMO

DEMO#1 – Early Prototype

Cordis, TED, WhoisWho, Publications

DEMO#2 – Proof of Concept

- EU Law in Force (en, fr)
- EU Whoiswho (en,fr)