EU-Wide Legal Text Mining Using Big Data Infrastructures
www.manylaws.eu

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ManyLaws

What is ManyLaws?

ManyLaws is a web platform that **facilitates intelligent access to and use of legal information** and **improves the effectiveness of decision-making** in legislative practices.

It delivers a suite of innovative services for **the public, businesses and governments**, capitalising on text mining, semantic extraction and advanced search and visualisation of EU, Austrian and Greek laws.

INEA CEF Telecom ManyLaws Project - Consortium

The ManyLaws project started in Sep. 2018 and ends March 2021, co-funded by INEA CEF Telecom under the Public Open Data topic.

Coordination
Big Data Management, Data Sources Integration
Information Processing, Legal Text Mining

Greek Case
Greek legal data sources
Services Evaluation
Dissemination

Technical Coordination
Service Infrastructure Implementation, Interactive Visualizations, Frontend Development
Integration with European Data portal
Communication, Sustainability

Conceptual Framework, Requirements and Services Definition
Pilot and stakeholders' engagement coordination
Training

Austrian Case
Austrian legal data sources
Services Evaluation
Dissemination

HPC Resources (ARIS supercomputing center)

ManyLaws Portal: The Processing Flow

Data Acquisition

Parliamentary Database

EUR-Lex

National Legal DB

Open Legal Data

Processing

Big, Linked Data

Mining Translation Semantic Annotation

ARIS HPC.GRNET

Service Provision

Modular, Extensible Service Oriented Architecture Interoperability with DSIs (eTranslation, eDelivery) Responsive Design

Service Infrastructure

Application

Contextualized Services Per Stakeholder Type

Advanced Queries and Results Visualization

Cases

Publishing

ManyLaws Open Legal Data Portal

Data Catalogue

European Data Portal

Legal Information → Big, Linked Data → (Machine) Retrievable Big Linked Data → Contextualised Data → Big Open Linked Data (BOLD)

ManyLaws

Target Users	Current Legal Frameworks
Citizens	🇬🇷 *Greece (Greek)*
Lawyers	🇦🇹 *Austria (Austrian/German)*
Businesses	🇪🇺 *Europe (English)*
Public Sector	
Scientific Community	

ManyLaws Key Services

- **Retrieve current legal information** from multiple legal frameworks across the EU

- Understand and **easily identify the correlations** among laws, improving the drafting process

- Access a **visual timeline** for all relevant legal texts

- **Compare and visualise connections** between equivalent or related laws from one or more Member States

- **Analyse** references to EU legislation within national laws

- Easily move from country to country / language to language via **automated translation**

- **Manually Annotate** The legal elements (for registered users)

- Law-related **Sentiment Analysis** of citizen comments (in social media or other sources)

![ManyLaws logo]

The ManyLaws Portal

A **next generation legal informatics and search engine portal: https://portal.manylaws.eu/**

Multilingual (English, Austrian, Greek)
Open to anyone to register and use
Containing all machine processable laws from Austria, Greece and all European Directives
Expanding day by day

Let's have a look !

The 7 novelties of Manylaws

1. The first Legal Analysis and Interrelation system that **works fully automatically** (without any human intervention in processing or analysing data)

2. Manylaws utilizes **High Performance Computing** infrastructures and can process vast amounts of information (3.5 years in 20 days, on ARIS HPC centre)

3. Manylaws uses all current **XML schemas** for legal information and open data (DCAT, AcomaNtoso, ELI) and is interoperable with systems such as the EU dataportal, EURLEX, National Parliaments and Law publication offices.

4. ManyLaws support seamless navigation between Austrian, Greek and European legal texts, containing **more than 550.000 documents**, at this stage

5. Manylaws utilizes the new **European eTranslation service (DSI)** and provides automatic translation of all Greek and Austrian legal elements to English.

6. It is the only legal information system that supports **automated decomposition, categorization, interrelation, visualization, translation and comparison** of legal elements in multiple countries and languages

7. It is an **open, extendible platform** that can support other applications both in law analysis and in other areas that require massively parallel text mining tools.

ManyLaws exploitation directions

Axis 1 : Law processing

- Offer ManyLaws as a service, in Greece or in the EU

- Include case law in the processing

- Include other countries, inside or outside the European Union

- Extend system functions (e.g. automatically codify legislation / case law on a topic)

- Increasing the possibilities of understanding and interpreting the law using Artificial Intelligence techniques (towards an "automated" justice)

- Interconnection with other law enforcement tools (eg LEOS / EU legislation drafting tool.

For all the above possibilities, we are looking for ideas, relevant programs and partners

Axis 2 : Application in a specific area of the legal system

- Manylaws can be used to thoroughly analyze a set of legislation (eg Green Deal legislation, Digital Governance legislation), creating a dedicated system or a specific result / deliverable.

- The above application may include the analysis of information that is not purely legal texts (eg studies, research, etc.)

- The application can be done in many countries / languages and can take the form of a specific project / service.

Proposals are already being formulated with other research projects for the integration of the ManyLaws "service".

Axis 3 : Application in another big textual data

The ManyLaws engine (which supports massive parallelisation and incorporates various artificial intelligence tools) can be used to analyze large volumes of data / text such as:

- Processing news and texts from social networks

- Processing literature (eg research publications, history)

- Processing public sector textual information and data

We are looking for applications in big textual data analytics.

ManyLaws

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@ManyLaws_EU

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