

# Legislation in the information society

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# Outline

- 1 Laws in the web
- 2 The legal semantic web

# Preserving the role of legislation in the information age

- align legislation to its purposes: anticipate and monitor its impact on the legal systems and on society
- promote the critical analysis: support making legislative proposals and rationally debating their merits
- align legislation to citizens' reasoned preference and views: enable citizens to express their view and preferences, provide them with feedback about choices of their representatives
- enable citizens to anticipate and control the application of laws: provide access laws and cases, ensure understandability
- coordinate legislation with other legal sources (national, foreign, international): take into account other legal sources, learn from others, develop joint initiatives

# Preserving the role of legislation in the information age: ICT contribution

- align legislation to its purposes: ICT can provide information on the legal and social effects of legislative acts
- promote the critical analysis: ICT can support communication and reasoned debate within the legislative process
- align legislation to citizens' reasoned preference and views: ICT can support communication and democratic debate
- enable citizens to anticipate and control the application of laws: ICT can provide tailored and updated information about law in force and its application
- coordinate legislation with other legal sources (national, foreign, international): ICT can support information, support communication, coordination and cooperation

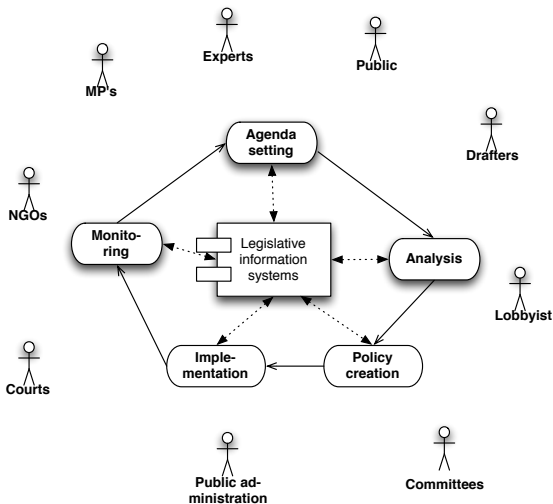
# Some tasks for a parliamentary information systems (beside administration)

## Computer support for

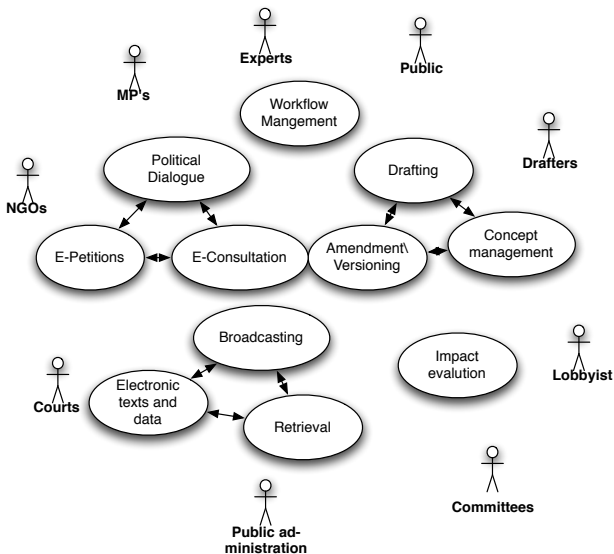
- preparing documents (drafting tools, linguistic tools, amendments management, etc.)
- accessing information (information retrieval, legal and factual databases)
- simulation (“What if analyses”) of legal and social impacts
- workflow management (lifecycle, security, timely involvement of relevant individuals)
- citizens’ access to the law (multi-channel publication, on paper, web, and through third parties, law in force),
- political dialogue (e-petition, e-consultation, discussion fora)
- institutional dialogue (interaction with courts, administration, other parliaments)

Not only MPs are interested: ICT enables openness to all

# Parliamentary information systems



# Functions of Parliamentary IS



# Legislation in the knowledge soup

A huge amount of legislative information is nowadays available on the web:

- in different formats (word, pdf, html, xml, etc.)
- searchable through search engines (good recall, but a lot of noise, little reliability)
- single pages are retrieved (no integration of data contained in different pages)
- data within pages is not automatically processable

We would like to:

- Automatically obtain relevant textual information, opportunely selected and integrated
- Automatically process information embedded in texts (e.g. generate the law in force, control deadlines, apply rules, etc.)

# Strategies and outcomes of the *semantic web*

Two strategies:

- 1 automatically understand and process natural language texts. Promising but limited results (for instance in automatic translation and classification)
- 2 insert in the web (within natural language texts or elsewhere) information that is machine understandable and can be process with the available advanced techniques (W3C approach)

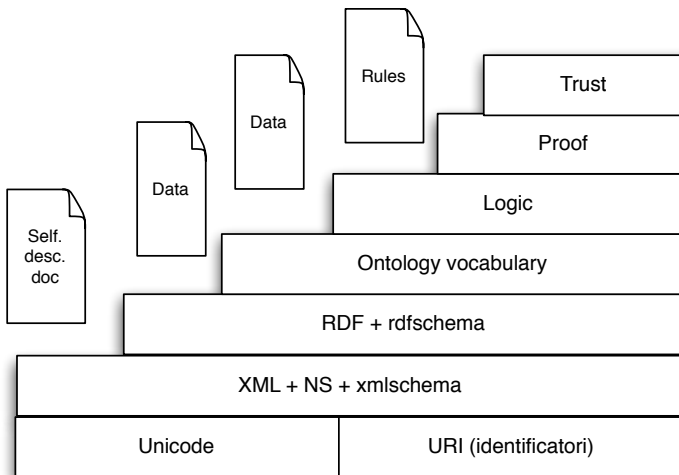
The second strategies has produced some results:

- better accessibility of textual information;
- supporting automatic integration of textual information;
- overcoming distinction between textual information and structured data (all legal information on the web, both texts and data, and various combinations of them)

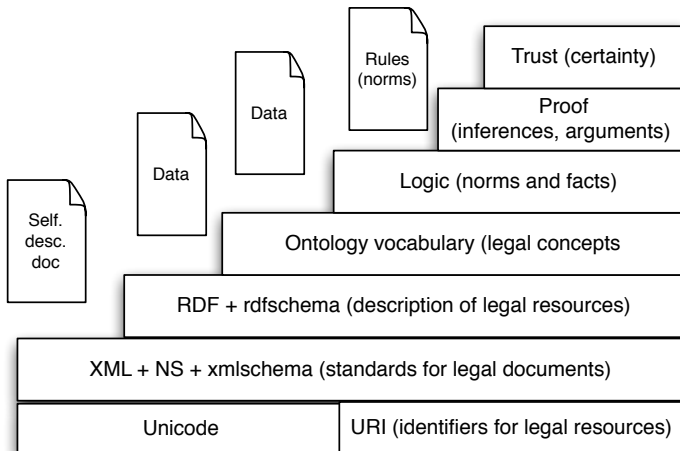
# Processable legal semantics?

- *Semantic web*: information partly machine understandable, which can be automatically processed according to its meaning
- *Legal semantic web*: legal (legislative) information partly machine understandable, automatically processable according to its legal meaning

# Tim Berners-Lee's vision



# Tim Berners-Lee's vision mapped to the law



# Content of the legal *semantic web*

The legal *semantic web* consists of automatically processable information (meanings) concerning:

- legal documents
- the law itself
  - the law contained in the document (which speaks the law, stating norms and defining concepts)
  - legal norms (without a precise textual reference)
  - legal facts (the facts to which legal norms apply)

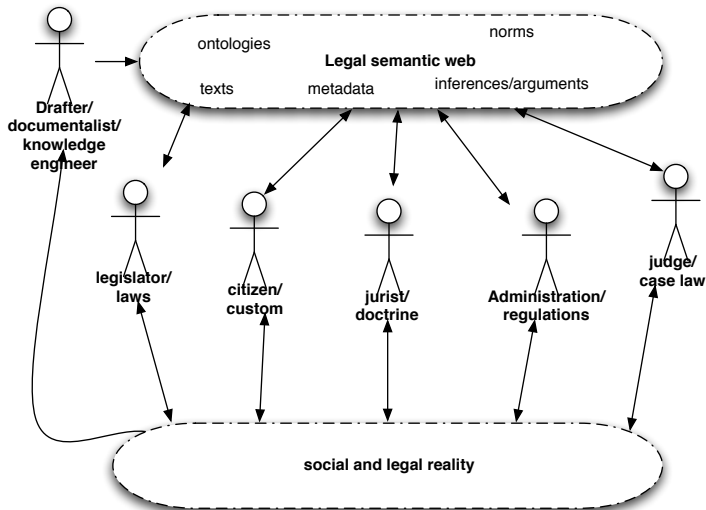
# The law in the *semantic web*

Machine processable legal contents:

- structures of legal texts
- references between legal texts
- the life-cycle of legal texts
- modifications of legal texts
- semantic of legal terms (thesauri, computational lexicons, light ontologies)
- legal concepts and their definitions (formal ontologies)
- semantical structures of normative language (semantic annotation of legal texts)
- norms (logical formalisation of normative contents)

If we add machine processable information to texts, then ICT can help us in preparing, storing, communicating, using such texts

# The double vision of the law



# Perspectives and problems of the legal semantic web

## Perspectives:

- the web can provide all with accessible legal information, tailored to their needs
- the web can be a space of democracy, a forum for political and legal debate.
- the web can support communication between legal agents

For this purpose we need to build a legal semantic web but:

- it must be accessible to everybody
- it must be accessibly to all systems and devices
- it must empower everybody as a producer of legal information

Legislation is a fundamental part of that information, and Parliaments can have a leading role in creating it.

# Legal semantic web and legislation

The legal semantic web represents an opportunity for the legislation

- maintenance of legal sources
- improvement of legal del drafting
- legislation based upon knowledge and dialogue
- publicity of procedures and information
- dialogue between sub-national, national, and international institutions

Compliance with (reasonable and) shared standards is a precondition for this opportunity to be realised.

# What kind of standards

Standards based on XML (eXtended Markup language), including:

- Markup: computer-processable information added to a text: `<title>Privacyact</title>`
- URI: universal resource identifiers:  
`stato:legge:1997-07-16;254@2000-12-03`
- Metadata: information about the document, which is include in the document (e.g. the lifecycle)

All of these element must be provided according to an open non-proprietary model

# Standards about what?

We need to specify in a precise way, understandable to a machine, and shared by all users, the following elements

- the identification of the legal source
- the organisation of its content (structure)
- links to other sources
- textual modifications
- information about the source
- concepts
- norms

NB: we need an incremental approach: each level is a precondition of the other, but no need to go beyond what is required and feasible

NB: each addition of machine processable information adds to what can be done with the text, to the support we can get from ICT tools

# Why standards

Because they enable

- preservation
- communication
- processing
- openness
- enrichment
- control
- decentralisation
- subsidiarity
- investment
- sharing
- competition
- cooperation
- neutrality
- progress

# What standards

## XML-based standards for legislation

- National standards, in many countries (e.g. Norme in rete, the Italian standard for legislative documents and regulations)
- Emerging international interchange standards: Metalex, developed by the Metalex-CEN consortium
- Emerging international standards: Akoma-Ntoso

# What prospects for standard-based legal documents

Legal texts enriched with machine processable information, which are

- produced during the legislative process
- containing information which contributes to direct the workflow
- preserved to record the workflow
- transformed into new documents as the workflow proceed (transferring the both the text metainformation)
- made accessible to everybody (without additional processing)
- open to everybody inspection
- distributed on a non-discriminatory basis

NB: we need an incremental approach: each level is a precondition of the other, but no need to go beyond what is required and feasible

# Tanks for your attention

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