

Electronic manipulation of European texts about conflicts of jurisdiction: a Semantic Web tool



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LEFIS
LEGAL FRAMEWORK FOR THE INFORMATION SOCIETY

The project

- **Collection:**
 - Spanish versions of texts of the EU relative to *conflicts of jurisdiction and international assistance on civil matters*
- **Goal:**
 - Tool for the *Association of Attorneys of Valladolid*
- **Relevant features:**
 - Automatic information extraction: structure, metadata, references
 - Profile-adapted user interface

The team

Computing

Mercedes Martínez
Joaquín Adiego
Alma M. Pisabarro

*GRINBD (Grupo de Recuperación de Información y Bibliotecas Digitales).
Department of Computer Science.
University of Valladolid (Spain).*

- Content engineering
- Information retrieval
- XML
- Language analysis
- Legislative databases

Law

Dámaso-Javier Vicente Blanco
Jose-Manuel Sánchez Felipe

*Department of International Private Law.
Faculty of Law. University of Valladolid
(Spain).*

- International investment
- International E-contracts and international e-commerce
- Protection of general interest in international commerce
- Community Law

Guidelines

- Normative documents
- User view
- Legal domain knowledge & expertise
- Open source
- Reasonable implementation efforts

Council Regulation (EC) No 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters

...

Chapter II

JURISDICTION

Section 1

General provisions

Article 2.

1. Subject to this Regulation, persons domiciled in a Member State shall, whatever their nationality, be sued in the courts of that Member State.

2. Persons who are not nationals of the Member State ...

Article 3

1. Persons domiciled in a Member State may be sued in the courts of another Member State only by virtue of the rules set out in Sections 2 to 7 of this chapter.

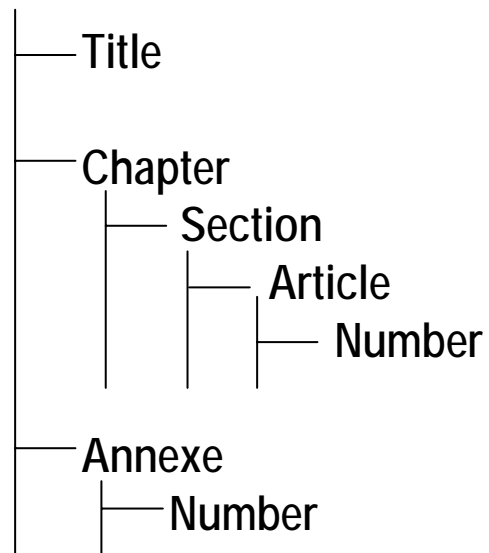
2. In particular the rules of national jurisdiction set out in Annex I shall not be applicable as against them.

...

Approach (I). Structure

- Document structure. Implicit in content.

RULE/DECREE/REGULATION/...



Council Regulation (EC) No 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters

...

Chapter II
JURISDICTION

Section 1
General provisions

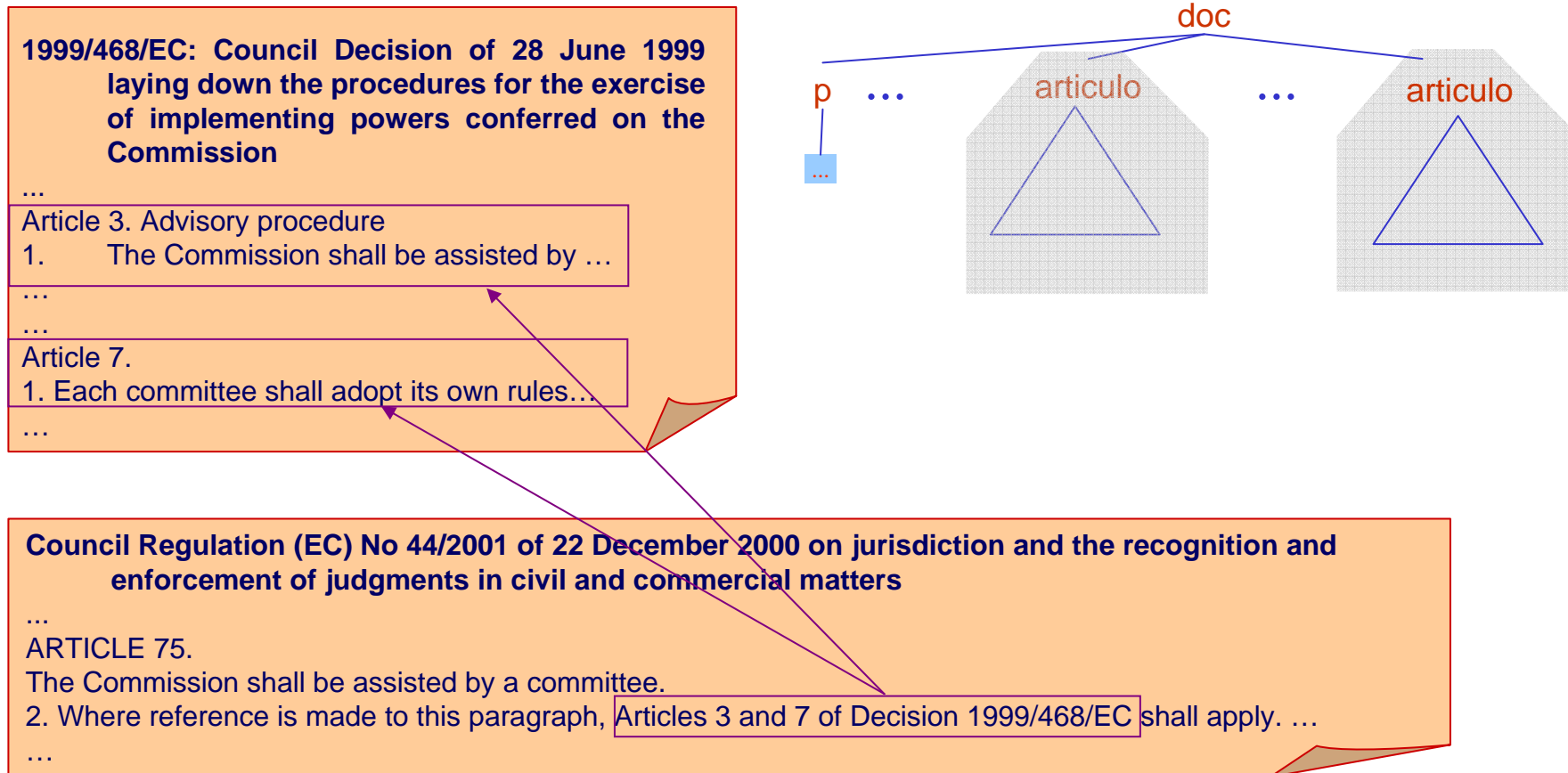
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2. In particular the rules of national jurisdiction set out in Annex I shall not be applicable as against them.

...

Approach (II). Relationships & structure

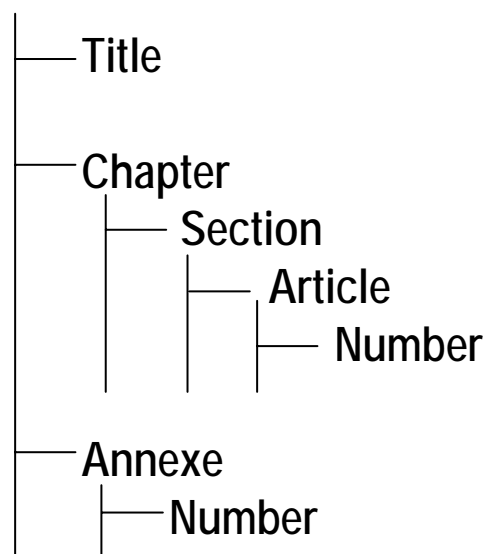
- Relationships between fragments, using the structure



Approach (III). Metadata & Structure

- Location of patterns that characterize the information to be extracted

RULE/DECREE/REGULATION/...



Convention on Jurisdiction and the enforcement of judgements in civil and commercial matters, done at Lugano on 16 September 1988

...

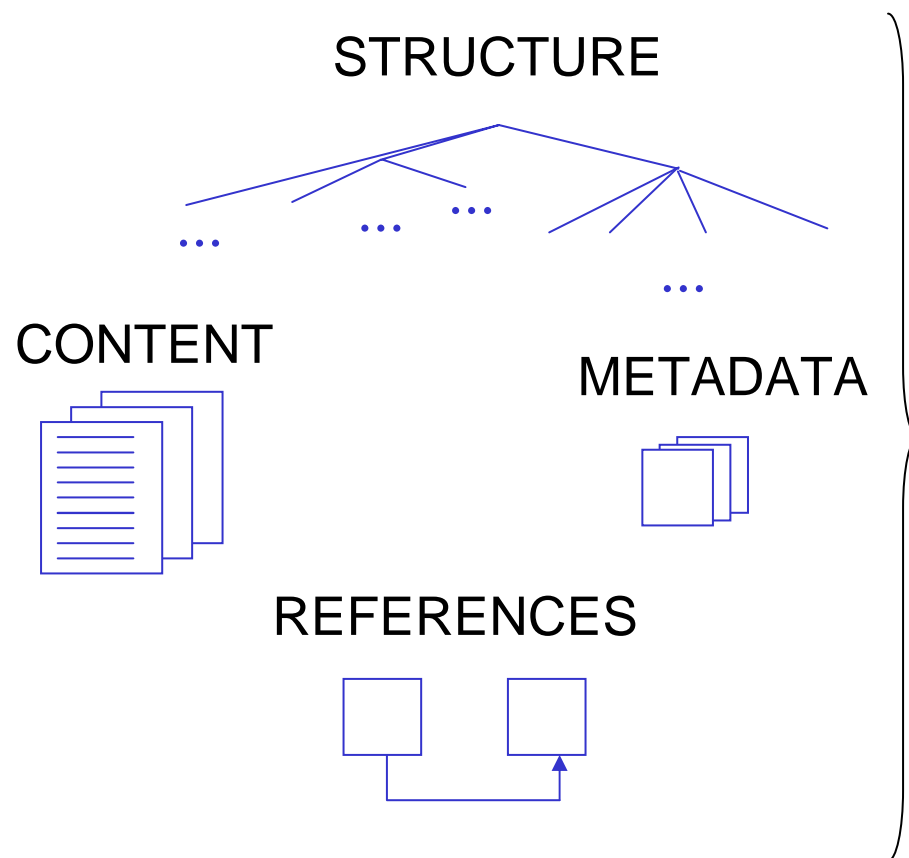
Article 68
This Convention, drawn up in a single original in the Danish, Dutch, Finland,
...

Por su Majestad el Rey de España
Pour le président de la République française

...

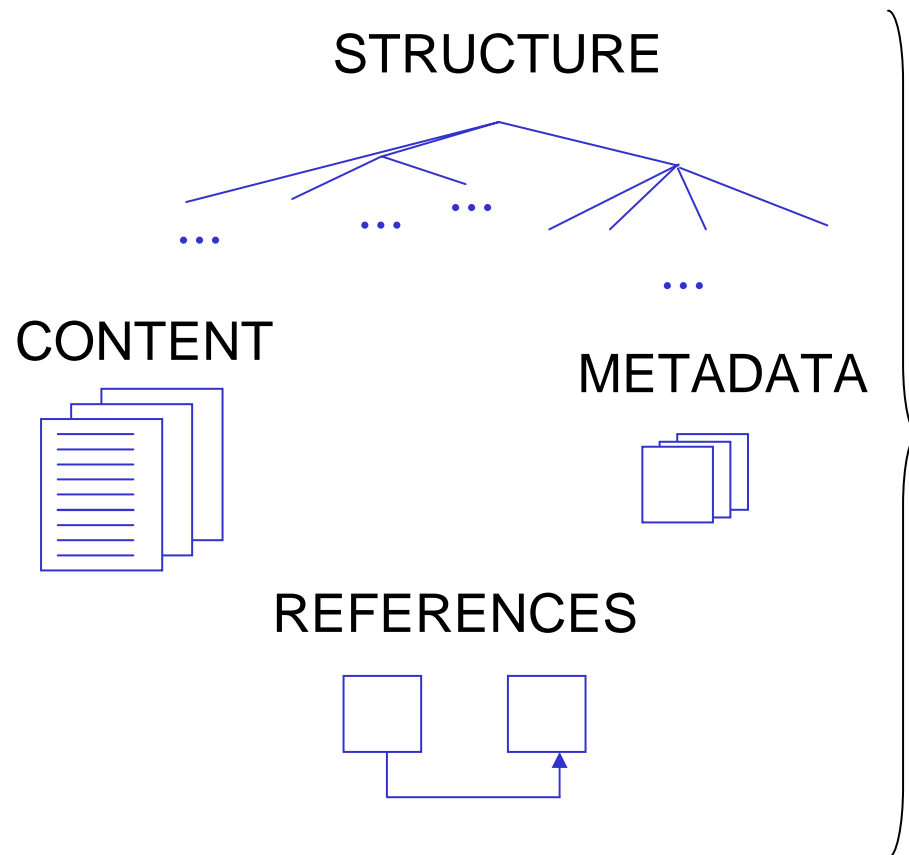
Approach (IV).

Documents & Treatments



- Structure extraction
- Structured information retrieval
- Structured information extraction
 - References
 - metadata
- Structure-based annotations
- Hypertext

Approach (V). XML



- Legislative text: XML document
 - norma.dtd, norma.xsd
- Metadata, references, annotations: additional XML documents
 - notas.xsd
 - enlaces.xsd
- XPath, XSLT, DTD / XML Schema, SAX, XLink, XPointer

Structure extraction

■ Transforming to XML: Content analysis

HA CONVENIDO LAS DISPOSICIONES SIGUIENTES :

COMPETENCIA

 TITULO II

 Seccion primera

 Disposiciones generales

<etiqueta1> Sección primera</etiqueta1>

 Artículo 2

 Sin perjuicio de las disposiciones del presente Convenio , las personas domiciliadas en el territorio de un Estado contratante estarán sometidas , cualquiera que sea su nacionalidad , a los organos jurisdiccionales de este Estado .

 A las personas que no posean la nacionalidad del Estado en que estén domiciliadas se les aplicaran las reglas de competencia aplicables a los nacionales .

 Artículo 3

 Las personas domiciliadas en el territorio de un Estado contratante estarán sometidas a los tribunales de otro Estado en virtud de las reglas enunciadas en las secciones 2 a 6 del presente Titulo .

- en Bélgica : el artículo 15 del Codigo civil (Burgerlijk Wetboek) y el artículo 638 del Codigo Judicial (Gerechtelijk Wetboek) ,

- en Dinamarca : el parrafo 2 del artículo 248 de la Ley sobre procedimiento civil (Lov om rettens pleje) y el artículo 3 del capitulo 3 de la Ley sobre procedimiento civil en Groenlandia

Structured information extraction

- **The information to be extracted:**
 - References
 - Metadata
- **Problems to deal with:**
 - Schema heterogeneity: multiple DTDs / XML Schemas



Schema heterogeneity

Reglamento (CEE) número 1970 de la Comisión, de 29 de junio, relativo al derecho de los trabajadores a permanecer ...

According to "w3cdlex.dtd"

```
<apartado>
...
<texto fam_fuente="Times New Roman">
Artículo Primero.
</texto>
<texto fam_fuente="Times New Roman">
Las disposiciones del presente Reglamento serán
aplicables [...] tal como se define en el
</texto>
<texto fam_fuente="Times New Roman"
negrita="Bold">
artículo 10 del Reglamento (CEE) número 1612/1968 del
Consejo relativo a la libre circulación de los trabajadores
dentro de la Comunidad.
</texto>
</apartado>
```

According to "norma.dtd"

```
<apartado>
...
<articulo>
<head> Artículo Primero </head>
<p>
Las disposiciones del presente Reglamento serán
aplicables a los nacionales de un Estado miembro que
hayan ejercido una actividad como trabajadores
asalariados en el territorio de otro Estado miembro, así
como a los miembros de su familia, tal como se define en
el artículo 10 del Reglamento (CEE) número 1612/1968
del Consejo relativo a la libre circulación de los
trabajadores dentro de la Comunidad.
</p>
</articulo>
```

Structured information extraction

- **The information to be extracted:**
 - References
 - Metadata
- **Problems to deal with:**
 - Schema heterogeneity: multiple DTDs / XML Schemas
- **We distinguish two manipulations:**
 - Structure
 - XML document parsing
 - Content
 - Information extraction



Structured information extraction

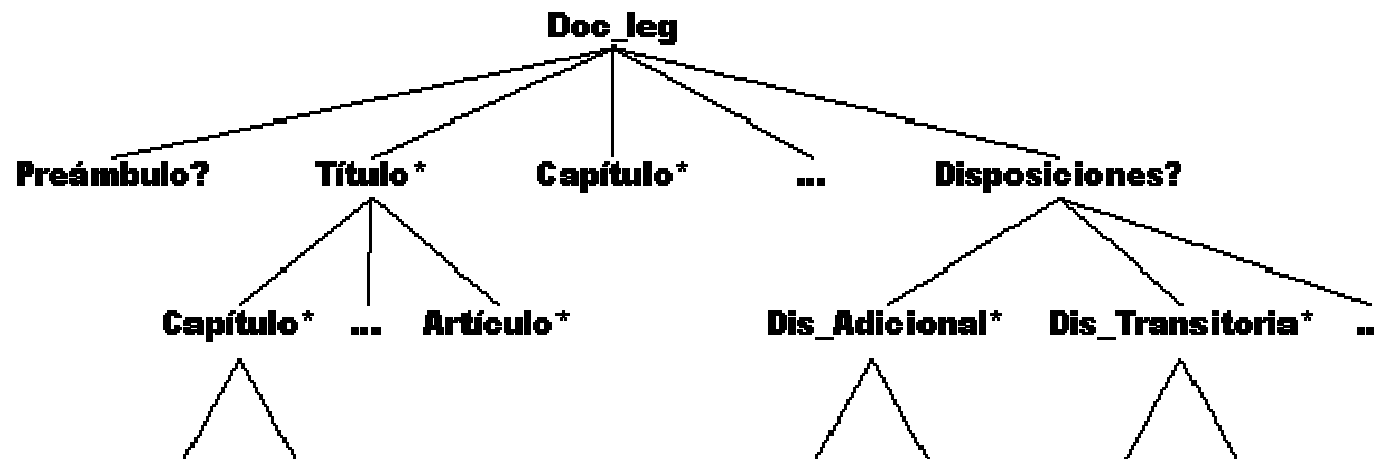
- **We distinguish two manipulations:**
 - Structure
 - XML document parsing
 - Content
 - Information extraction

- **Steps:**
 - 1) Transformation to a PIVOT SCHEMA
 - 2) Processing



Method: to characterize the structure rules

PIVOT SCHEMA = Divisions + Inclusion rules



Taxonomy for references

| Reference | Item | Range | Number | Context |
|-----------------------------------------------------------------|----------|----------|----------|----------|
| <i>Council Decision 1998/468/EC of 28 June 1999</i> | Document | External | Single | Direct |
| <i>Articles 68 and 72 to 74 of the Code of Civil Procedure</i> | Fragment | External | Multiple | Direct |
| <i>without prejudice to Article 4</i> | Fragment | Internal | Single | Relative |
| <i>The Treaty and the Conventions referred to in Article 69</i> | Document | External | Multiple | Relative |

Current work. Collections

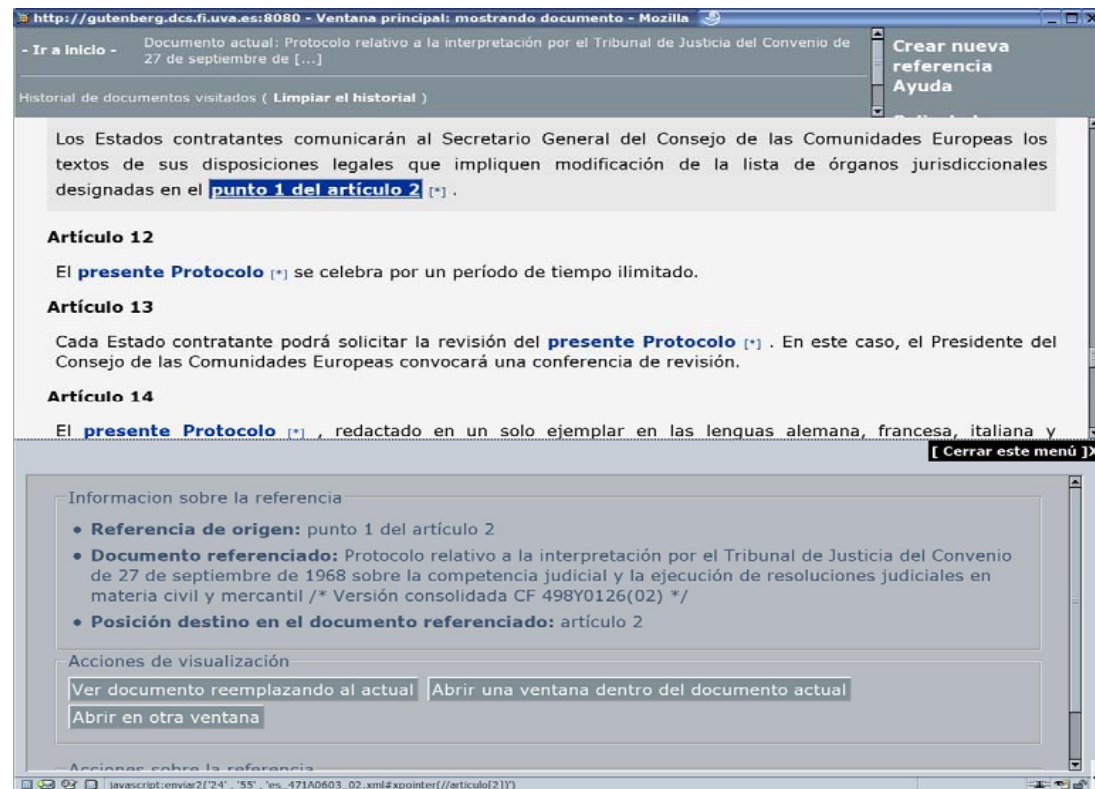
1. *Judicial cooperation in civil matters* (Community Law)

- Around 30 documents, available in the prototype



Current work. Tools (I).

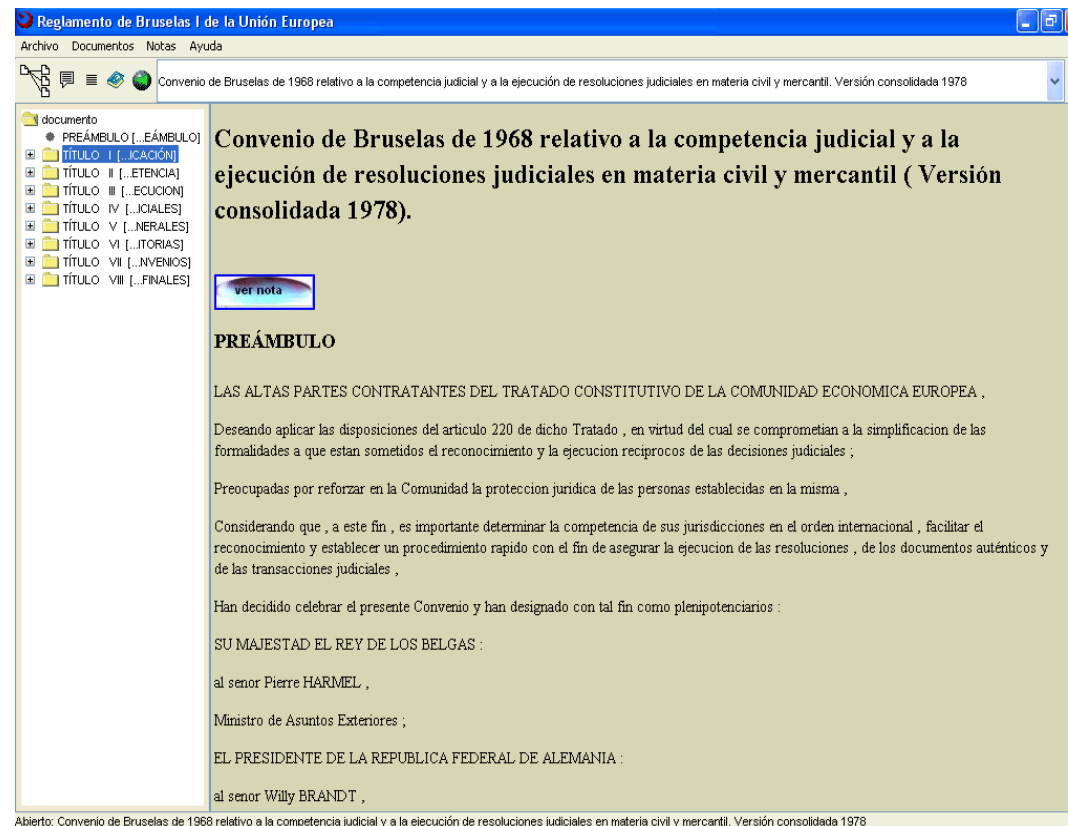
Reference manipulation



<http://gutenberg.dcs.fi.uva.es:8080/referencias>

Current work. Tools (II).

Judicial cooperation in civil matters: 1st prototype



Work in progress: Attorney association tool

- **Web-based tool for document querying**
 - Search
 - Inside a document: term search
 - In a collection: concept-based
 - Comparison
- **Personalized local user tool**
 - Local work with local collection
 - Updates using web services
- **Insertion of judicial decisions from the jurisprudence of the Court of Justice of the European Communities**

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