Overview

14:30-15:30 Introduction Legal Knowledge Management
[Tom van Engers]

16:00-17:00 CEN MetaLex: How to manage interchange aspects
[Monica Palmirani, Fabio Vitali, Tom van Engers]

09:00-10:00 Natural Language Techniques for Legal Knowledge Management

10:00-10:45 Analysis Techniques I [Tom van Engers]

11:15-12:00 Analysis techniques II [Tom van Engers]

12:00-13:00 Knowledge Representation [Tom van Engers]

14:30-15:00 Computational Models of Legal Arguments
[Tom van Engers]

15:30-17:30 The Structure of Argumentative Texts [Henry Prakken]

18/09/2009

CEN MetaLex: How to manage interchange aspects

Monica Palmirani
Fabio Vitali
Outline

- Problem
- CEN/ISSS MetaLex:
  - History; What is CEN and WA
  - Participants; Scope
  - Elements and metadata
  - In practice
  - Impact on existing formats
- Concluding Remarks
Building Applications Difficult and Costly

Solution: Use an Interchange Standard
Problems

- Different formats, ‘owners’, naming conventions, services, …
- Not all formats ‘open’
- Hard to link between different collections
- Building applications difficult and costly
- Danger of ‘vendor lock-in’

A Solution

- Open Interchange Format

MetaLex initiative
History

- 2002: EPOWER IST project consortium proposes first version of MetaLex
- 2003-2005: Slow but increasing adoption in projects and tools
- 2006: A new attempt through CEN/ISSS workshop, parallel to EU FP6 project ESTRELLA

What is CEN?

- The European Standards Committee
- A non-profit association, whose members are national standards bodies (BSI, DIN, NEN, AFNOR, etc.)
- Two main sorts of consensus group:
  - Technical Committees - made up of national delegations.
  - Workshops – open to any interested party globally
- CEN/ISSS activities are mainly Workshops
CEN Workshops

- A working group that delivers a CEN Workshop Agreement (CWA)
- A “bottom up” process
- A public process
- Results by consensus of the participants
- Technical specifications, guidance material, best practice, information, etc.
- Main topics: eBusiness and eGovernment, application of technologies (eLearning, eHealth), public interest (e-signatures, network and information security, etc.)

CEN Workshop Agreement

- CWA is developed in a Workshop with direct participation of all interested parties
- Referenced in the catalogues of the CEN Members
- In some cases available from the CEN web-site
- Is valid for 3 years, after which
  - Withdrawal or
  - Prolongation for a further period (with or without amendments) or
  - Followed by a Technical Specification or European Standard (EN)
- A CWA that is considered mature to become an EN: developed in a CEN/BT Task Force; ENs have to be implemented as a national standard by all CEN Members
- Costs…
1st CWA Meetings:
- Kick-off 7th July 2006, Brussels, BE
- 22nd September 2006, Amsterdam, NL
- 6th December 2006, Paris, FR

Published 27th April 2007 as CWA 15710:2007

2nd CWA Meetings:
- Extension proposed 15 Dec 2007, Leiden, NL
- 4th June 2008, Portorož, SI
- 8th September 2008, Florence, IT

Updated version accepted, but also some revisions were needed……

NEWS !!!!!!!!!!!

Last week most recent version was published and is now open for comments

www.MetaLex.eu
CWA Participants

- Jurisource Ltd, NL
- Be Informed, NL
- METADAT, AT
- RuleBurst, GB
- Carneades Consulting, HU
- knowledgeTools International GmbH, DE
- Wolters Kluwer Legal, NL
- Al-in-Law, SL
- Tax-Fin-Lex, FI

- CNIPA, IT
- Consorzio Pisa Ricerche, IT
- Sogei - Ministry of Economy & Finance of Italy, IT
- Austrian Parliamentary Administration, AT
- Council for the Judiciary, NL
- Ministry of Justice, NL
- EU Publications Office, LU

In practice

- IT: NiR schemas MetaLex compliant; pilots in senate and Ministry of Finance
- Akoma Ntoso MetaLex compliant
- NL: Spatial plans MetaLex compliant; pilots in Ministry of Justice and parliament; vendor tools MetaLex compliant
- Pilots in various parliaments
- Used in Hungary, Slovenia, Belgium, Portugal
- European parliament, UK parliament interested in adopting
- …
CEN Workshop Scope

- MetaLex XML positions itself as an interchange format for information about bibliographic objects,
- a lowest common denominator for other standards,
- intended *not* to replace jurisdiction-specific standards and vendor-specific formats in the drafting and publications process,
- but to impose a standardized *view* on legal documents for the purposes of software development.

Impact on Existing Formats

- Re-define local schema in terms of CEN/MetaLex
- Possibly just by adding CEN/MetaLex attributes to local source files
  - Local schema should allow inclusion of attributes from other namespaces in order to validate
- Items should at least identify themselves as exemplifying a manifestation
Redesign Existing Formats

MetaLex Schema

Local Schema

Local Schema

Local Schema

local XML source

local XML source

local XML source

09/09/09

Akoma Ntoso and CEN MetaLex

CEN MetaLex

urType

urMetaType

absRootType

absMContainerType

absContainerType

absMContainerType

absHContainerType

absBlockType

absMilestoneType

absinlineType

absSourceType

absCitationType

absQuoteType

absDateType

Akoma Ntoso

publicationDate

akomantoso

body

subsection

p
eol

ref
The key issue

- Q: How to allow interchange when no assumption on vocabulary can be made?
- A: Have a way to identify key features based on something else than element names:
  - Special Types in schema
  - Special Attributes
- They can be adopted both at the same time and act in combination:
- `<xsd:element name="foo" type="e:hcontainer"/>
  <xsd:element name="bar" type="e:block"/>
  <xsd:element name="ttt" type="e:container"/>

- `<foo e:id="foo1" e:numbering="local">
  <bar>Book III</bar>
  `<foo e:id="foo2" e:numbering="global">
  <bar>Art. 13</bar>
  <ttt>... </ttt>

Redesign Existing Formats
Concluding Remarks

- Minimally intrusive standardization initiative
- Enables interchange and inter-linking
- Enables generic software solutions
- Enables N-Lex and Ipex like services

INFO www.MetaLex.eu

Goals of CEN Metalex

- **Neutral document/data format**: provide an homogenous and neutral standard for representing the structure of heterogeneous legal resources.
- **Interchange document/data format**: provide an interchange data format from one standard to other, but also between legacy systems, applications layers, and different data formats.
- **Homogenous format for publishing**: provide a open document format for favouring publishing of heterogeneous legal resources independent to the legal system and jurisdiction.
Goals of CEN Metalex

- **Preserving meaning of structure**: the risk is to have a harmonised model but with a lack of legal meaningful concerning structure (e.g. numbering of comma, sidenote)
- **Preserving meaning of metadata**: metadata are more influenced by the local modelling and representation due to different legal system principles.
- **Normalise different metadata model**: metadata admits more of one model meaningfully valid.
- **Minimal data set format for querying**: provide a minimal data set of metadata for favouring query between heterogeneous legal documents coming from different local or national standards.

Complete scenario
Transformation mechanism

CEN MetaLex Schema

National Standard Schema

Metadata Vocabulary Mapping LMIF

Document Ontology OWL

XSLT

EP Standard Document


CEN MetaLex document & RDF/A

<metalex>EP Parliament</metalex>

Vocabulary mapping mechanism: LMIF

<table>
<thead>
<tr>
<th>NIR element</th>
<th>Attributes</th>
<th>LKIF-core class</th>
</tr>
</thead>
<tbody>
<tr>
<td>pubblicazione</td>
<td>tipo=&quot;GU&quot;; num=&quot;113&quot;; norm=&quot;19990517&quot;</td>
<td>lkif:Act_of_Publication; lkif:Publication_Type; lkif:Publication_Number; lkif:Publication_Date</td>
</tr>
<tr>
<td>entratainvigore</td>
<td>norm=&quot;19990518&quot;</td>
<td>lkif:Act_of_Commencement; lkif:Enter_In_Force_Date</td>
</tr>
</tbody>
</table>

National standard metadata vocabulary ---< classes of LKIF-core

Statements on tag and attribute not on the values