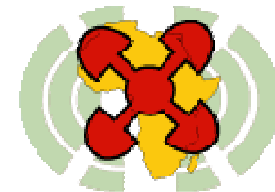


Akoma Ntoso an open document standard for Parliaments

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CIRSFID
University of Bologna

Fabio Vitali
Associate Professor of Computer Science
Department of Computer Science and Engineering
University of Bologna



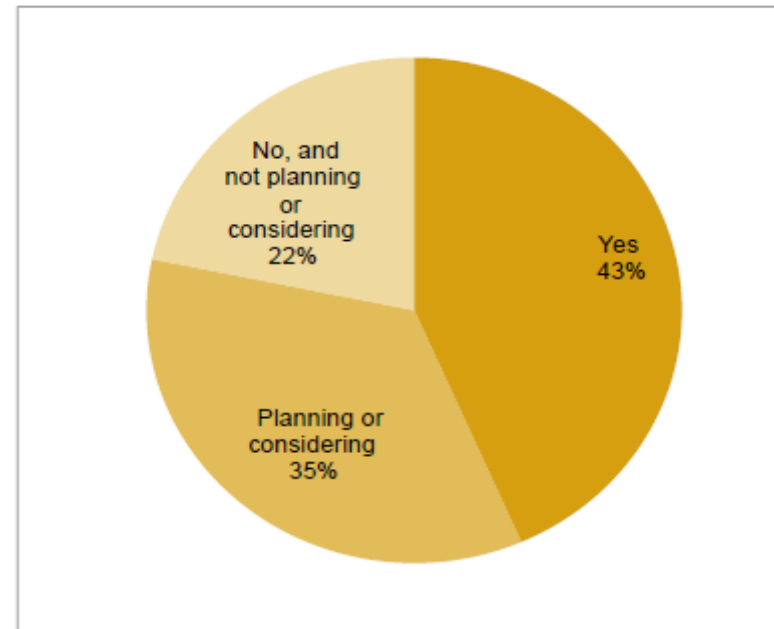
OASIS

Use of XML in Parliaments

- From the World e-Parliament Report 2012:
 - ❑ 43% countries stated to use XML in Parliament for bill
 - ❑ 35% countries stated to have the intention to use it in future



Figure 5.3: Use of XML for bills by parliaments with a document management system for bills



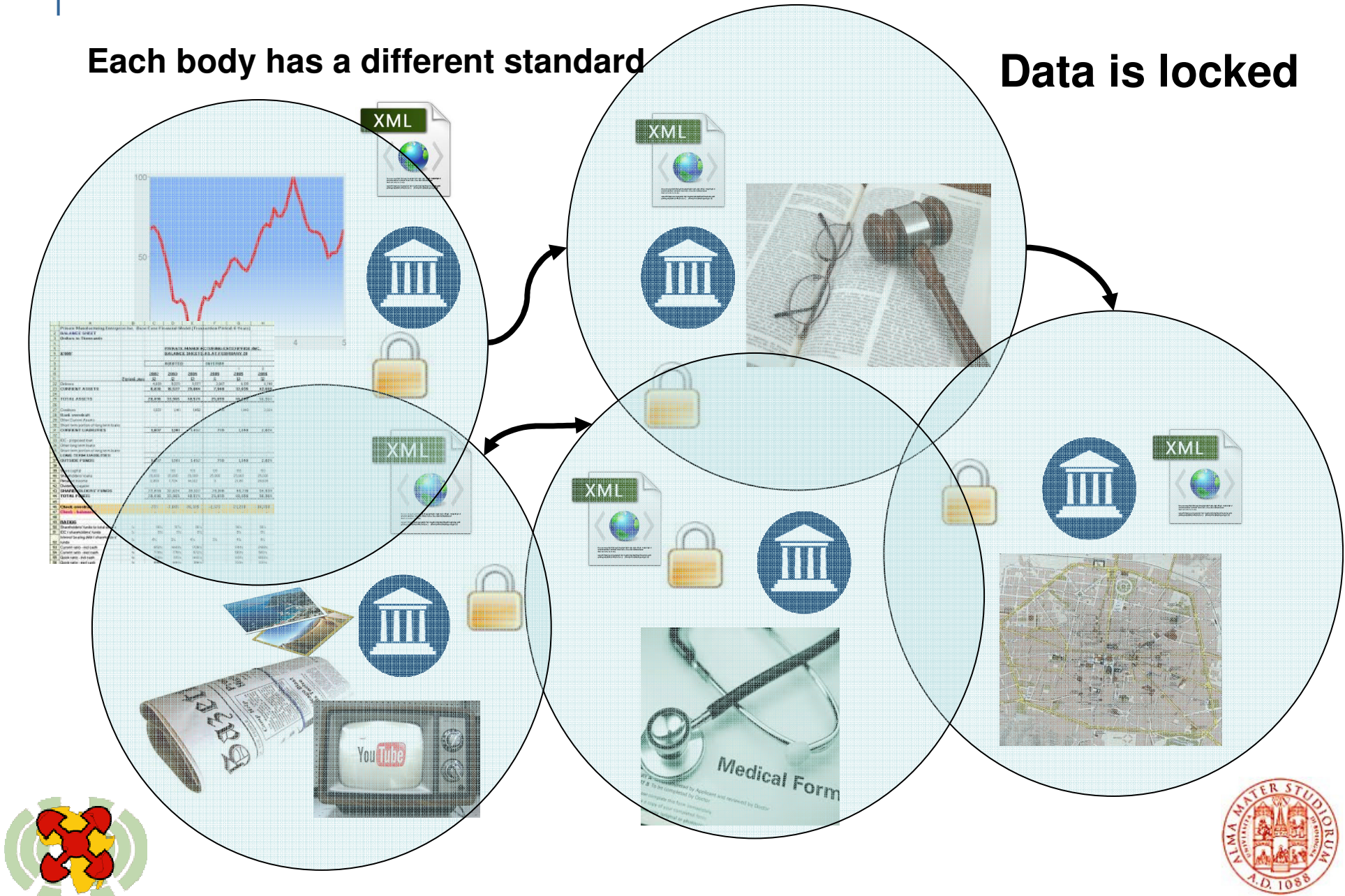
(Source: Survey 2012, Section 3, Question 3; 70 respondents)



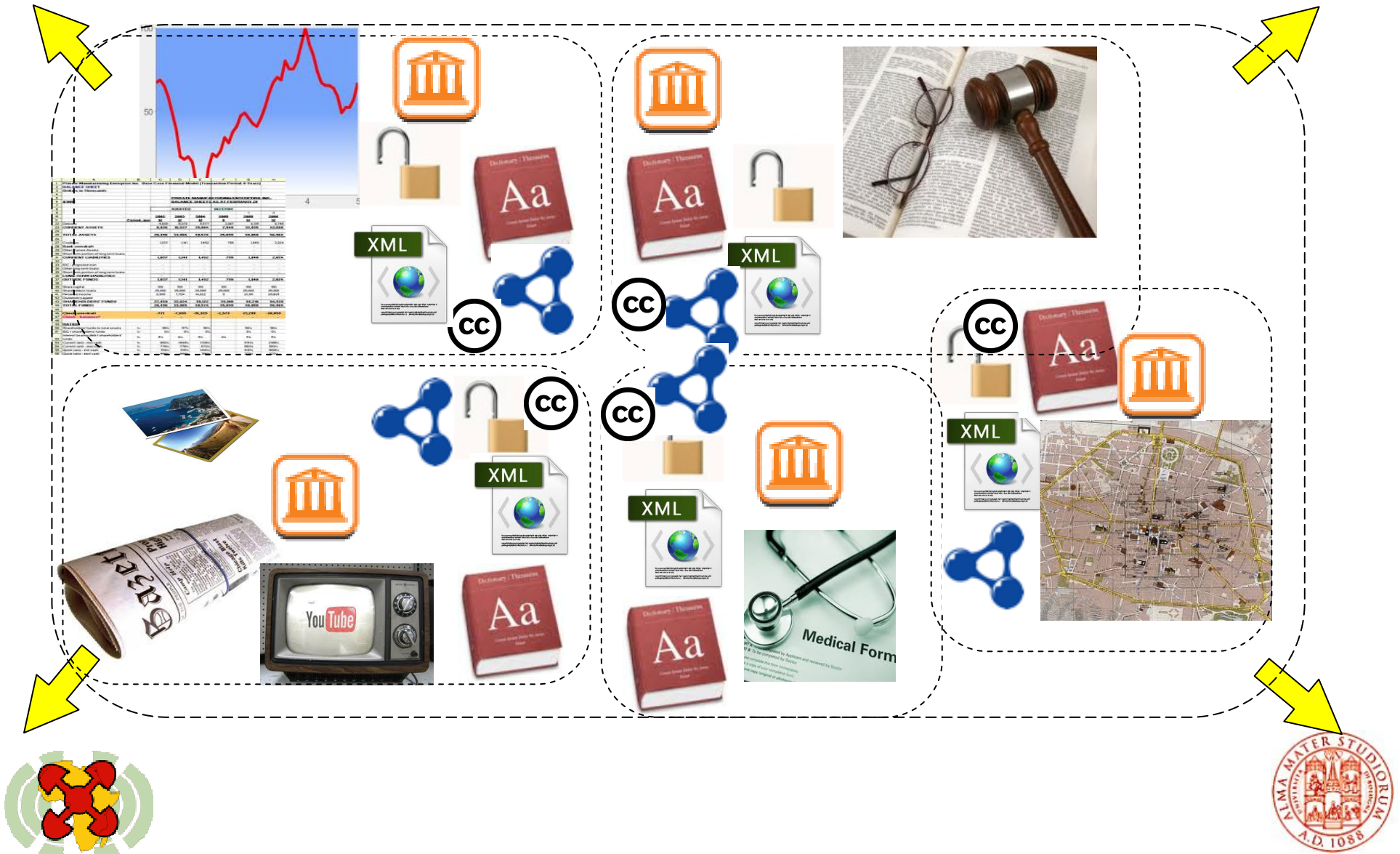
Old use of XML

Each body has a different standard

Data is locked



A new paradigm for open legal document and data



Legal Open Document/Data

Web of Documents



Legal Documents

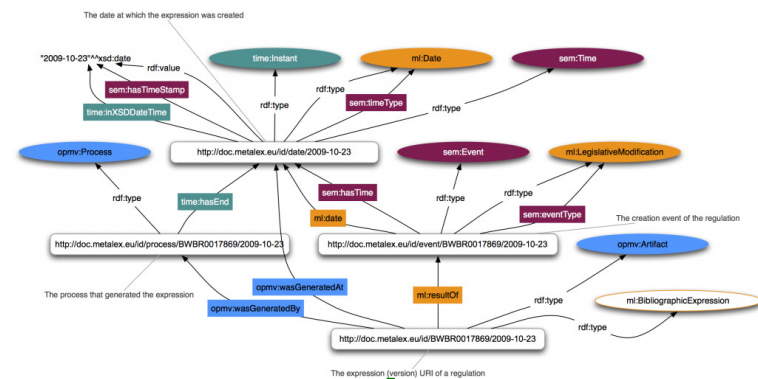


From legal open documents
to legal open data

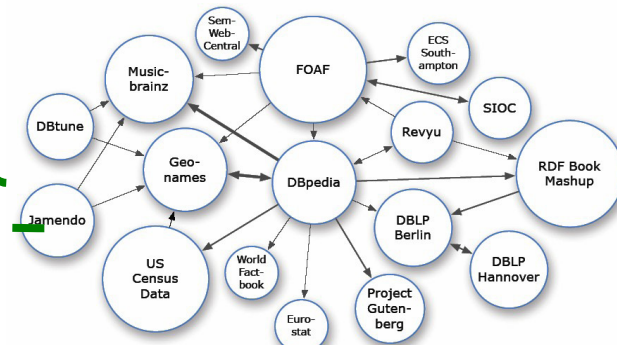
Web of things



Semantic Web



Web of data



Legal XML standards in the world

- 1997 ■ EnAct - Tasmania, Australia, New Zealand e Canada
- 1999 ■ FORMEX data model - EUR-LEX
- 2001 ■ NormeinRete – Italy
- 2002 ■ MetaLex and SDU BWB - Netherland
- 2003 ■ LexDania – Denmark
- 2003 ■ eLaw - Austria
- 2004 ■ CHLexML - Swiss
- 2006 ■ **AKOMA NTOSO – first release**
- Crown XML Schema for Legislation - United Kingdom
- 2008 ■ Chile XML
- 2008 ■ House of Representatives

2013



OASIS LegalXML
2009

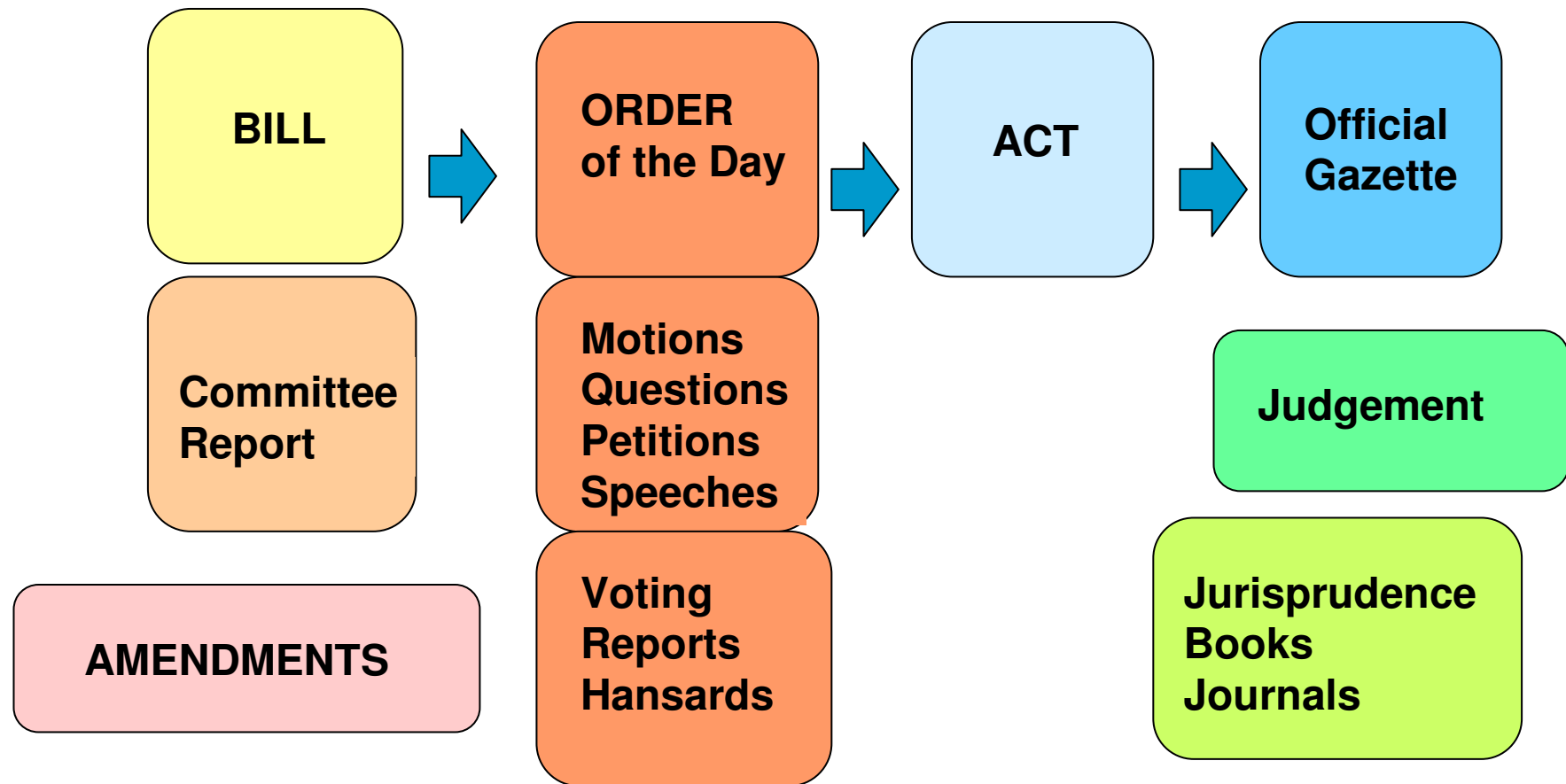
MetaLex/CEN

AKOMA NTOSO in OASIS

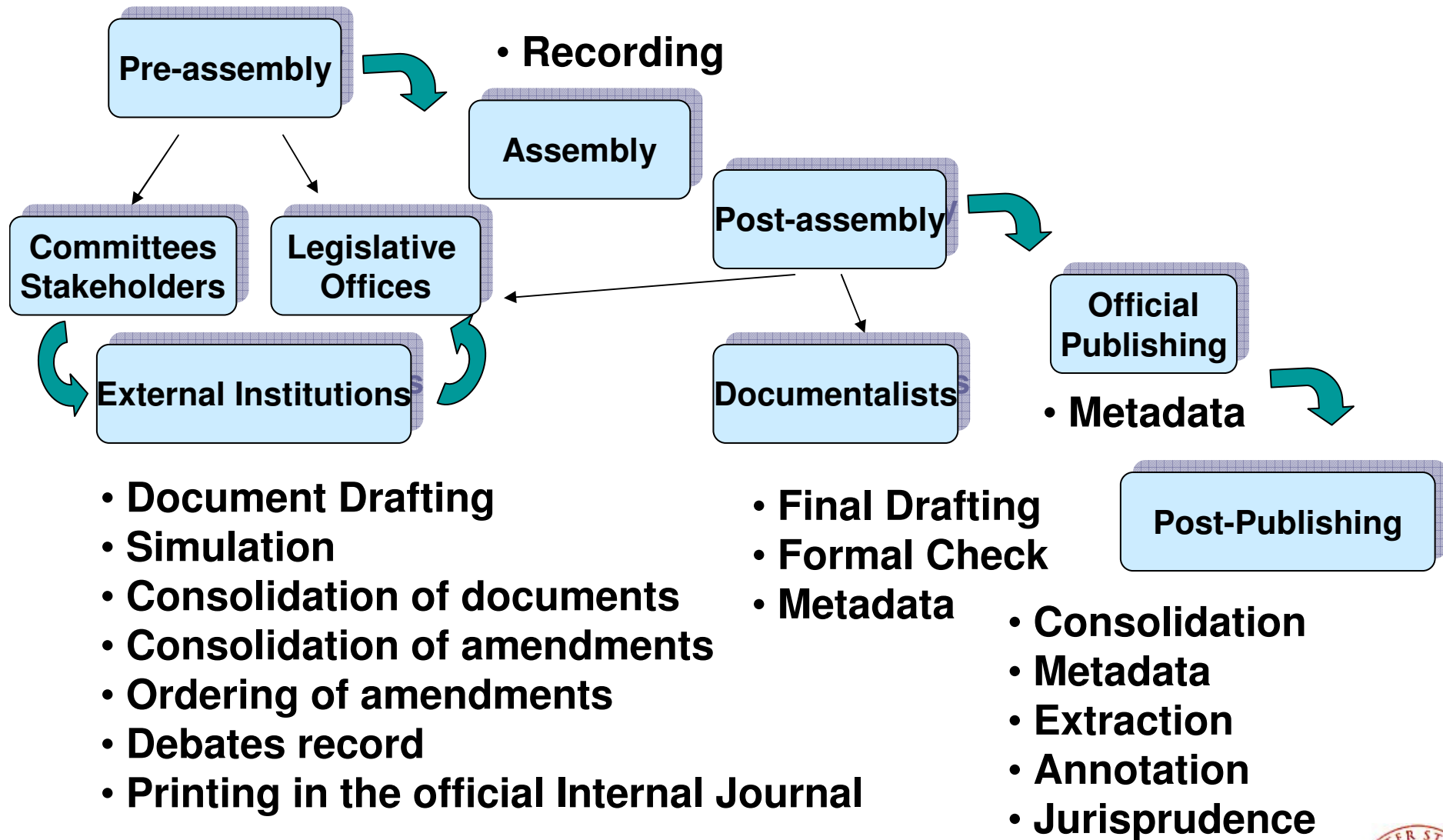
- An open XML standard for all the legal documents used in Parliamentary processes and judgments
- Started in 2005 in the project “Strengthening Parliaments’ Information Systems in Africa”, promoted by the UNITED NATIONS Department for Economics and Social Affairs (UNDESA)
- Akoma Ntoso means “**Linked Hearts**” and it is a symbol used by the Akan people of West Africa to represent understanding and agreement



Akoma Ntoso document types



Parliament Legislative process



Akoma Ntoso for Transparency, Quality and Efficiency

XML by itself is not a guaranty for transparency. Yet, Akoma Ntoso has explicit features that support it:

- Clear division of metadata from official content
- Explicit **lifecycle** of the document and tracking of workflow events
- **Systematic** connection of separate pieces of information to extract new legal knowledge
- Long-term **preservation** of legal validity (authentic document)
- Management of **multiple linguistic expressions**
- Data model for **open government data**
- Preservation of **privacy/liability** issues (e.g. in judiciary document)



AN support for parliamentary activities

- **Support for the generation of new documents**
 - ❑ Drafting activities, record keeping, translation into national languages, etc.
- **Support for workflow and lifecycle of documents**
 - ❑ Management of documents across lifecycle, storage, security, timely involvement of relevant individuals and offices
- **Support for citizens' access to the legal global information**
 - ❑ Multi-channel publication (on paper and on the web), search, classification, identification
- **Further activities**
 - ❑ Consolidation, comparison, language synchronization, etc.



Akoma Ntoso for transparency and authenticity

```
<akomantoso xmlns="http://www.akomantoso.org/1.0">
```

```
<act>
```

```
<meta>
```

Metadata annotation by editors

Ontology annotation by editors

Workflow metadata by the system

Analysis metadata of the scholar

```
</meta>
```

```
<preface>
```

Authorial content by the author

```
</preface>
```

```
<preamble>
```

Authorial content by the author

```
</preamble>
```

```
<body>
```

Authorial content by the author

```
</body>
```

```
<signature>
```

```
</signature>
```

```
<attachments>
```

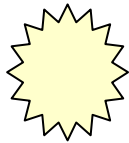
Authorial content by the author

```
</attachments>
```

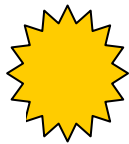
```
</act>
```

```
</akomantoso>
```

Signature
of the editor



Signature
of the author



(XAdES)



OASIS



Akoma Ntoso open source tools

- Editors: Lime, Bungeni, AT4AM
- URI/IRI Resolvers
- Textual Parser
- XML Validator
- Converters
- Presentation
- Sub-schema extractor
- Parliament SW Platform



AT4AM for All



XML Validator
Web-based XML validation service





Lime

parsers

tree

login preferences

Buttons
for
marking
up

view

LIME - Language Independent Markup Editor - Mozilla Firefox

File Modifica Visualizza Cronologia Segnalibri Strumenti Aiuto

LIME - Language Independent Markup Editor

lime.cirsfi.unibo.it/demo/

Più visitati Google

Welcome Demo User

Outline

- preface
 - docNumber
 - proponent
 - docDate
 - docTitle

Document editor

California Legislature—2011–12 first extraordinary session

ASSEMBLY BILL No. 4

Introduced by Assembly Member Logue

December 6, 2010

An act to amend Section 11343.4 of the Government Code, relating to regulations.

AB 4, as introduced, Logue. Regulations: effective date. Existing law, the Administrative Procedure Act, governs the procedure for the adoption, amendment, or repeal of regulations by state agencies and for the review of those regulatory actions by the Office of Administrative Law. Under existing law, a regulation or an order of repeal of a regulation becomes effective on the 30th day after it is filed

with the Secretary of State, except as provided. This bill would require that a regulation or an order of repeal of a regulation become effective, instead, on January 1 next following a 90-day period after the date it is filed with the Secretary of State, except as provided.

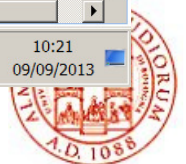
The California Constitution authorizes the Governor to declare a fiscal emergency and to call the Legislature into

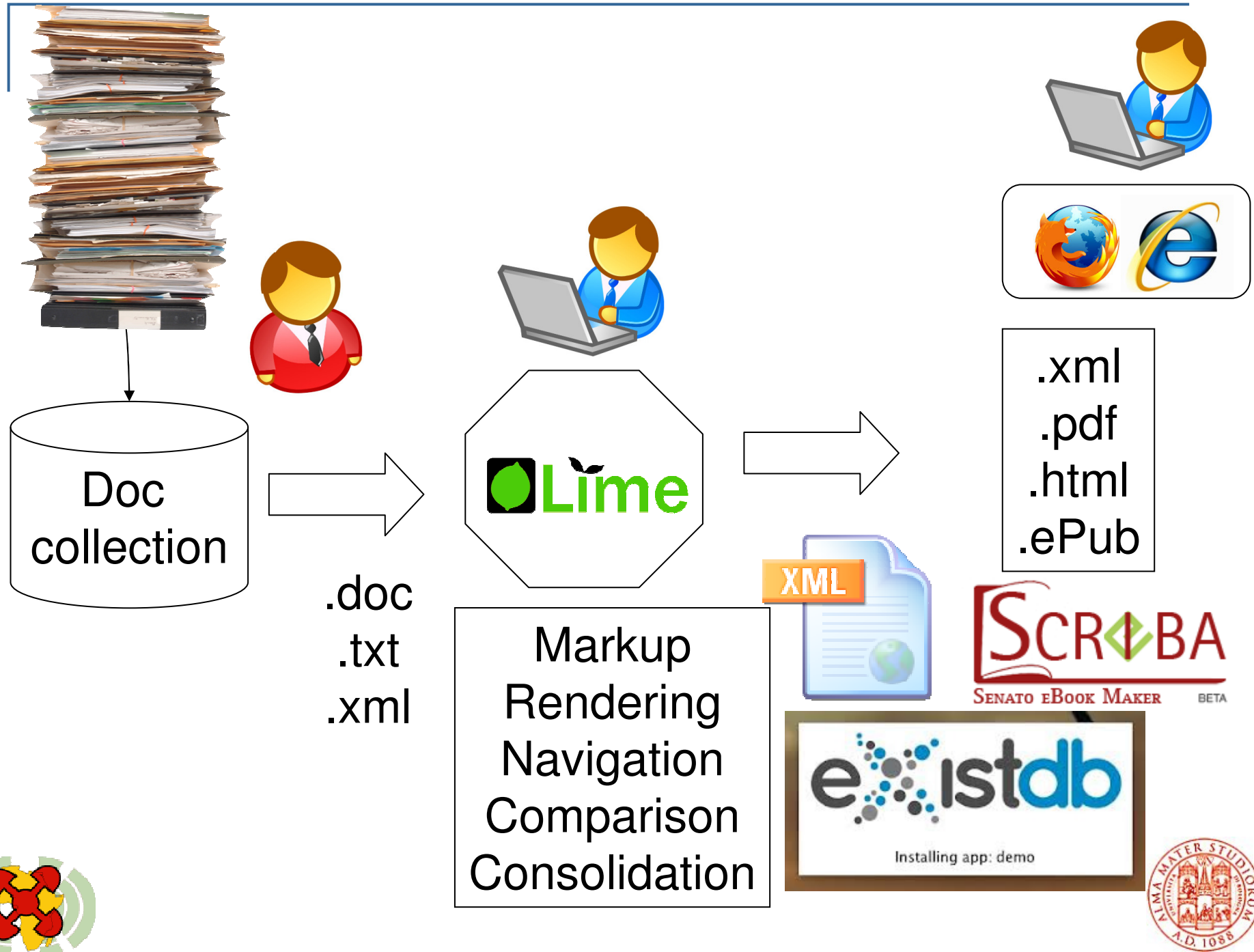
Path: bill > preface > docTitle


Document markup

Document structure Common elements

- Set preface
 - Set document type
 - Set document Number
 - Set date
 - Date: 12/06/10
 - Set proponent
 - Set document Title
 - Set location
- Set preamble
- Set body
- Set conclusions
- Set annex







File Edit Document Preferences Window

Welcome Demo User

Document editorAkoma Ntoso previewDifferences Viewer

URI manager

Document 1: /diff/uy/bill/2003-08-19/carpeta3303-2003/esp.2005-04-10/2.uChange documentResetDocument 2: /diff/uy/bill/2003-08-19/carpeta3303-2003/esp.2005-08-17/3.uy_biChange documentReset

TextXML

PROYECTO DE LEY

Artículo 1º

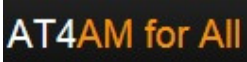










- Declárase, por vía interpretativa, a los efectos dispuestos por la Ley N° 12.091, de 5 de enero de 1954 y por la Ley N° 16.387, de 27 de abril de 1993, que las embarcaciones deportivas o de recreo, de bandera extranjera, con sus accesorios, que arriben al país navegando por sus propios medios, podrán entrar, permanecer y salir de aguas jurisdiccionales o de puertos o lugares de la República amparadas por su bandera y sin otro requisito que presentar el rol respectivo de la tripulación y la matrícula y sin cumplir con las exigencias aplicables a los buques mercantes, pudiendo ser sus propietarios y/o usuarios, personas físicas o jurídicas, nacionales o extranjeras, radicadas o no en el país.

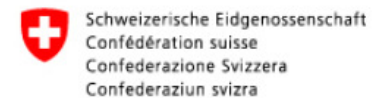
PROYECTO DE LEY

Artículo 1º

- Declárase, por vía interpretativa, a los efectos dispuestos por la Ley N° 12.091, de 5 de enero de 1954, que las embarcaciones deportivas o de recreo, de bandera extranjera, con sus accesorios, que arriben al país navegando por sus propios medios, podrán entrar, permanecer sin límites de tiempo y salir de aguas jurisdiccionales o de puertos o lugares de la República, amparadas por su bandera, registrando el rol respectivo de la tripulación y la matrícula ante la Prefectura Nacional Naval, pudiendo ser sus propietarios y/o usuarios, personas físicas o jurídicas nacionales o extranjeras radicadas o no en el país.

Success stories of Akoma Ntoso

- Senate of Brazil (act, bill, consolidation, point-in-time)
- European Parliament (bill and amendments) 
- Library of Congress of Chile (bill and debates) 
- Senate of Italy (bill publication in open data) 
- Parliament of Uruguay (bill workflow)  
- US Code Consolidation service (code management) 
- State of California (xml standard for document management)
- Hong Kong City State (xml standard for document management) 
- Kenya Law Report (xml standard for document management) 
- Federal Chancellery of Switzerland (publication in gazette) 
- High Court of Cassation of Italy (xml standard for document management)  
- several private companies are using Akoma Ntoso for document management systems



Motivation to move to a standard body

- Parliaments, Congresses, courts and tribunals need to invest in a robust, persistent, non-volatile XML standard for legal documents.
- Akoma Ntoso committee wants:
 - to widen the community and increase the number of pilot cases
 - to move Akoma Ntoso to the status of *International Standard*
 - to generate a robust governance
- For these reason in 2012 we started a TC in OASIS



OASIS: international standardization body

- Not-for-profit consortium founded in 1993
- Open to all: companies, government agencies, academic and research institutions, individuals
- International **community**
 - 5,000+ participants including: 600+ organizations in 100+ countries
 - 33% in Europe 13% in Asia
- Technical agenda set by members
- Board and Committee chairs elected by members
- About 65 Technical Committees active in many domains



- LegalXML.org Community – 1998.
 - Legal, court, business, academic, and technology professionals.
 - Collaboration on non-proprietary standards for the legal community.
- OASIS LegalXML Member Section – March 2002.



LegalDocML/Akoma Ntoso

- Open the call for participation: 28 Feb. 2012
- First TC meeting: 29 March 2012
- Co-chairs: Monica Palmirani, Fabio Vitali
- Secretaries:
 - Tom Bruce, Cornell Law School, Legal Information Institute
 - Ashok Hariharan, Africa i-Parliaments Action Plan (UN/DESA)
 - Claudio Fabiani, European Parliament
 - Sylvia Tosar Piaggio, Parlamento del Uruguay
- Document quality manager:
 - LexisNexis, a Division of Reed Elsevier
- TC representative in LegalXML:
 - Shifrin, Laurel, LexisNexis, a Division of Reed Elsevier



LegalDocML TC members

- 43 members in the TC

Africa i-Parliaments Action Plan (UN/DESA) - Belgian Fedict - Chile Biblioteca del Congreso Nacional - Cornell Law School - European Parliament - Ghana Parliament - Glasgow Caledonian University - Kenya National Council for Law Reporting - Lebanese Parliament - Maurius Naaonal Assembly - Uganda Parliament -University of Bologna-CIRSFID - University of Liverpool - Uruguay Parliament - US Military Health Services - LexisNexis, a Division of Reed Elsevier – Well Fargo – Library of Congress - National Center for State Courts – State of California – Autonoma de Barcelona, DTI.....



Akoma Ntoso improvement

- New requirements from a wide number of pilot cases:
 - ❑ documentCollection including codes
 - ❑ jurisdiction metadata (e.g. individual UK kingdoms)
 - ❑ linguistic metadata (e.g. corresponding structure between different languages)
 - ❑ legal drafting metadata (e.g. renumbering)
- Naming convention for permanent identifiers of whole document (URI/IRI) and fragments (ids)
- Testing with a large number of different legal systems and pilot cases
- Varying levels of compliance



Akoma Ntoso compliance levels

- Level 1: structure of the document
- Level 2: structure and naming convention
- Level 3: structure, naming convention, basic metadata (e.g. normative references)
- Level 4: structure, naming convention, basic metadata, advanced metadata (e.g. events, modifications)
- Level 5: structure, naming convention, basic and advanced metadata, enriched semantic elements (e.g. references, location, quantity, term, person, etc.)



FIRST STEP

Working Draft

OASIS TC Workflow

SECOND STEP

JOB DONE

Committee Specification

Full Majority Vote

Public Review

**Full Majority Vote
Open for 30 days**

Committee Specification

Special Majority Vote.

THIRD STEP

Statements of Use

Three use cases

Candidate standard

Public Review

Open for 60 days

FOURTH STEP

Balloting

15% of the OASIS

OASIS Standard



Conclusions

- Akoma Ntoso is a robust Legal XML standard for legal open document in parliament
- It is fitted for open government data and semantic web
- Akoma Ntoso is extendable and customizable
- Each organization can use only the needed part
- Open source tools are now available
- Several pilot cases and end-user projects produce substantial proof-of-concepts that it is applicable to a variety of legal systems and scenarios
- OASIS standard process makes Akoma Ntoso an international standard stable with a good governance



Monica Palmirani

LEGISLATIVE XML:
PRINCIPLES
AND TECHNICAL TOOLS



Monica Palmirani

XML LEGISLATIVO:
PRINCIPIOS
E INSTRUMENTOS
TÉCNICOS



**Thank you
for your attention**

Monica Palmirani - monica.palmirani@unibo.it



OASIS



References

Akoma Ntoso official website

- <http://www.akomantoso.org/>

Akoma Ntoso Open Source Tools

- AT4AM EU Parliament tool video: <http://vimeo.com/48325937>
- AT4AM for all: <http://www.at4am.org/>
- LIME UNIBO Web Editor: <http://lime.cirsfid.unibo.it/>
- AKResolver: <http://akresolver.cs.unibo.it/>
- Akoma Ntoso subschema extractor:
<http://akn.web.cs.unibo.it/aknssg/aknssg.html>
- Validator: <http://legixinfo.wordpress.com/2013/08/22/free-akoma-ntoso-validator/>

Akoma Ntoso other tools

- Xcential Web Editor: <http://legisproweb.com/>

OASIS LegalXML-TC

- Akoma Ntoso and [LegalDocML TC-OASIS](#)
- [LegalRuleML TC –OASIS](#)
- [LegalciteM -OASIS](#)

