Akoma Ntoso Version 1.0 Part 1: XML Vocabulary

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This prose specification is one component of a Work Product that also includes:

- *Akoma Ntoso Version 1.0 Part 1: XML Vocabulary* (this document). http://docs.oasis-open.org/legaldocml/akn-core/v1.0/csd01/part1-vocabulary/akn-core-v1.0-csd01-part1-vocabulary.html.
- *Akoma Ntoso Version 1.0 Part 2: Specifications*. http://docs.oasis-open.org/legaldocml/akn-core/v1.0/csd01/part2-specs/akn-core-v1.0-csd01-part2-specs.html.
- XML schemas: http://docs.oasis-open.org/legaldocml/akn-core/v1.0/csd01/part2-specs/schemas/.
- XML examples: http://docs.oasis-open.org/legaldocml/akn-core/v1.0/csd01/part2-specs/examples/.

Related work:

This specification is related to:

- *Akomo Ntoso: XML for parliamentary, legislative & judiciary documents*. http://www.akomantoso.org.

Declared XML namespaces:

- http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13

Abstract:

This document provides the motivations, the scope, and the design principles of the Akoma Ntoso XML standard. We include also a narrative part concerning the main functionalities of Akoma Ntoso XML standard. We intend also to provide a discursive illustration of the benefits, features and scenarios using Akoma Ntoso XML standard.

Status:

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1 Introduction

1.1 Terminology

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

1.2 Normative References

[RFC2119] Bradner, S., “Key words for use in RFCs to Indicate Requirement Levels”, BCP 14, RFC 2119, March 1997. http://www.ietf.org/rfc/rfc2119.txt.

[IRI] International Resource Identifiers as per RFC 3987 (http://tools.ietf.org/html/rfc3987).

[ISO3166] ISO 3166. (http://www.iso.org/iso/home/standards/country_codes/iso-3166-1_decoding_table.htm).

[ISO639-2] ISO 639-2 alpha-3. (http://www.loc.gov/standards/iso639-2/).

[XML-SCHEMA] XML-Schema Part 0: Primer Second Edition (http://www.w3.org/TR/xmlschema-0/).

1.3 Non-Normative References

[RDF] Resource Description Framework (http://www.w3.org/RDF/).

[FRBR] Functional requirements for bibliographic records: final report / IFLA Study Group on the Functional Requirements for Bibliographic Records. — München: K.G. Saur, 1998. — viii, 136 p. — (UBCIM publications; new series, vol. 19). — ISBN 978-3-598-11382-6. http://www.ifla.org/files/assets/cataloguing/frbr/frbr_2008.pdf.

[AkomaNtosoNaming-v1.0] *Akoma Ntoso Naming Convention Version 1.0*. Edited by Véronique Parisse, Monica Palmirani, Fabio Vitali. OASIS Committee Specification Draft 01. http://docs.oasis-open.org/legaldocml/akn-nc/v1.0/csd01/akn-nc-v1.0-csd01.html. Latest version: http://docs.oasis-open.org/legaldocml/akn-nc/v1.0/akn-nc-v1.0.html.

1.4 Status

The present document provides a presentation of the main motivations, design principles, the benefits for using Akoma Ntoso vocabulary and approach. The document is non-normative material and it is thought for presenting the main pillars of Akoma Ntoso to the stakeholders that need to take decisions about how to manage the legal sources in digital manner in the Semantic Web society.

In this specification, when MUST is used in the text, it MUST be understood as “in order to conform to level 2 of compliance with the Akoma Ntoso schema.”

2 Overview

The LegalDocumentXML Specifications provides a common legal document standard for the specification of parliamentary, legislative, and judicial documents, for their interchange between institutions anywhere in the world, and for the creation of a common data and metadata model that allows experience, expertise, and tools to be shared and extended by all participating peers, courts, Parliaments, Assemblies, Congresses, and administrative branches of governments. The standard aims to provide a format for long-term storage of and access to parliamentary, legislative and judicial documents that allows search, interpretation, and visualization of documents.

The LegalDocumentXML Specs aims to achieve the following objectives:

- To create a common legal document standard for the interchange of parliamentary, legislative and judicial documents between institutions anywhere in the world.
- To provide a format for long-term storage of and access to parliamentary, legislative, and judicial documents that allows search, interpretation, and visualization of documents.
- To create a common data and metadata model so that experience, expertise, and tools can be shared and extended by the participating peers - be they courts, Parliaments, Assemblies, Congresses or administrative branches of governments.
- To create a common mechanism for naming and linking resources (URI) so that documents produced by Parliaments and Courts can be easily cited and cross-referenced by other Parliaments, Courts or individual users.
- To be self-explanatory - that is to be able to provide any information for its use and meaning through a simple examination of schema and/or example documents, without the aid of specialized software.
- To be extensible - that is to allow modifications to the models within the AKOMA NTOSO framework so that local customisation can be achieved without sacrificing interoperability with other systems.

The specifications of the standard is based on the experience of the Akoma Ntoso vocabulary as formalised in XML-schema. For this reason, the specification keeps the name "Akoma Ntoso" and the root of the XML-schema will be "akomaNtoso".

LegalDocML/Akoma Ntoso (hereafter referred to simply as Akoma Ntoso) is an open standard meant to make the structure and meaning of legal documents “machine readable.” The machine-readable descriptions of a document enable content managers to add meaning to the content and to describe the structure of the knowledge about that content. In this way, a computer can analyse information using processes similar to human deductive reasoning and inference, but in a massively faster way so that smart advanced services (such as point-in-time consolidation of legislation) can be achieved.

Making documents machine readable occurs via “markup.” Markup is the act of adding machine-readable annotation and labels to all the parts of a document in order to allow computer-based processing to be carried out (from publication to print to storage to technical analysis, etc.). In Akoma Ntoso, these annotations and labels consist of XML tags.

The next section describes the three main features that characterise Akoma Ntoso:

- Descriptiveness;
- Rich data models;
- Separation of data and metadata.

2.1 Descriptiveness: everything has a name

The Akoma Ntoso standard distinguishes between concepts regarding the description and identification of legal documents, their content, and the context in which they are used.

Names are used to associate the document representations to concepts so that documents can be “read/understood” by a machine, thus allowing sophisticated services that are impossible to attain with documents containing only typographical information, such as documents created in word-processing applications.

To make documents machine-readable, every part with a relevant meaning and role must have a “name” (or “tag”) that machines can read. The content is marked up as precisely as possible according to the legal analysis of the text. This requires precisely identifying the boundaries of the different text segments, providing an element name that best describes the text in each situation, and also providing a correct identifier to each labelled fragment.

Tag names, formally known as element names, are the basic vocabulary of the Akoma Ntoso language. The element name may be shared by many text fragments of a document and reveals their structural or semantic role. These include concepts such as preamble, section, paragraph, clause, reference, etc. In Akoma Ntoso there are almost 200 different element names to select from, covering a large majority of situations encountered in any legal document.

Besides the very specific names, Akoma Ntoso provides many generic names for those circumstances that are not precisely described by specific names. It is of fundamental importance to use generic elements only when no specific term is available in Akoma Ntoso.

2.2 Rich data models: ontologies

In computer science, an ontology is a data model that represents concepts within a single domain and relationships between those concepts. Ontologies identify a number of classes of relevant concepts and the properties and the relationships between those classes.

Akoma Ntoso uses ontologies to relate facts and statements about the document and its content to concepts, things, individuals, and organizations that are mentioned within, but not necessarily stored within, the document being marked up.

For instance, the identification of a specific individual acting as a “Deputy Minister” in a “Parliamentary Debate” requires not only uniquely specifying the “name of the individual,” but also a mechanism to reliably associate the debate to that specific individual (as opposed to any other individual who might have the same name). This is done through ontologies that allow enriching documents, not just with metadata, but also with information that refers to clear, unambiguous and verifiable concepts.

The recording of information in this way also helps document the workflow and process used to create the document.

2.3 Separation of data and metadata: editors vs. authors

Akoma Ntoso makes an explicit and complete separation between the role of authors (who take the responsibility for the content in terms of sentences, words, and punctuation - e.g. sponsor of an act) and that of editors (who physically write the text on the mandate of the author - e.g. attorney - and decide and organize the final layout and publication of the document).

In the field of legal publishing, the concept of an author may be somewhat abstract (e.g., a legislator offering an amendment), whose content is the result of a formal action (e.g., a final vote of approval), while editors may intervene at all stages of the publication process.

In this regard, distinguishing between the content and an editorial addition is in many cases subtle and may be difficult to establish. A rule of thumb is to try to determine the state of the document at the moment it left the hands of the author and was taken in by the editors. For instance, even publication in an Official Gazette does not clearly establish the “official” content of a document. Some published data (such as the number of the gazette itself) was not decided upon by the official authors and as such should be considered metadata and not content.

Editors have two main tasks in the production process of Akoma Ntoso documents:

- To identify and label (i.e., mark up) the pieces of the original content according to their role and structure;
- To provide additional information about the document itself that is not contained in the official text as created by the original author.

3 Scope of the language

The main purpose of the Akoma Ntoso is to develop a number of connected standards, vocabulary and guidelines for deliberative bodies, parliamentary, legislative and judiciary documents, and specifically to:

- Define a common document format;
- Define a common model for document interchange;
- Define a common data schema;
- Define a common metadata schema and ontology;
- Define a common model for citation and cross-referencing.

3.1 Document format

Deliberative bodies function through the medium of documents. Debate in legislative chambers and court proceedings are recorded as documents. Legislation is passed through the voting process via a combination of documents, the proposed legislation itself, proposed amendments, committee working papers, and so on.

Given that most of the processes are document-centric, the key enabler of streamlined information technology in these bodies is the use of open document formats for the principal types of documents. Such open document formats allow easy exchange and aggregation of information – in addition to reducing the time required to provide the information via different electronic published media.

The IT industry has coalesced around a standard technology for Open Document Formats known as XML (eXtensible Markup Language). Akoma Ntoso makes use of XML to define the structure and syntax of its open document standards. It includes a set of XML-based parliamentary, legislative and judiciary open document formats to cover:

- Parliamentary debates;
- Committee briefs;
- Journals;
- Legislation and regulation — covering the life-cycle of a piece of legislation;
- Judgments.

3.2 Model for data interchange and open access

This specification defines a common MODEL for data interchange and open access to the deliberative bodies' documentation, such as parliamentary, legislative, and judiciary texts.

Regardless of the processes that generate and use parliamentary, legislative, and judiciary documents; regardless of the cultural and historical factors that give shape and substance to these documents; and regardless of the human languages in which these documents are written, there are undeniable similarities that are shared by documents of the same type, of different types, for different purposes, of different countries.

One of the main objectives of Akoma Ntoso is to be able to capture and describe these similarities so as to unify and streamline, wherever possible and as far as possible, the formats and software tools related to parliamentary, legislative, and judiciary documentation, and to describe processes in a similar way. This lends itself to reducing the need for local investments in tools and systems, to helping open access, and to enhancing cooperation and integration of governmental bodies both within the individual countries and between them.

Akoma Ntoso defines a model for open access focused on the following issues:

- Generation of documents: it should be possible to use the same tools for creating the documents, regardless of their type, country, language, and generation process.

- Presentation of documents: it should be possible to use the same tools to display on screen and print on paper all documents, regardless of their type, country, language, and generation process.
- Accessibility of documents: it should be possible to reference and access documents across types, languages, countries, etc., converting the network of explicit references among texts into a web of hypertext links that allow the reader to navigate easily and immediately across them.
- Description of documents: it should be possible to describe all documents, regardless of their types, languages, countries, etc., so as to make it possible to create repositories, search engines, analysis tools, comparison tools, etc.

At the same time, the Akoma Ntoso model considers the differences that exist in individual document types, that are derived from using different human languages, and that are implicit in the legislative culture of each country. Therefore the common open access model is designed to be flexible, to support exceptions, and to allow extensions far enough to provide support for all individual characteristics that can be found in a complete document set covering different cultures and countries.

3.3 Document-centric schema

This specification defines a common parliamentary, legislative and judiciary document-centric schema.

Parliaments and courts work with a number of distinct types of documents such as legislation, debate records, parliamentary questions, judiciary proceedings, judgements, etc.

Akoma Ntoso explicitly supports each major type of document with specific provisions for individual characteristics. The definition takes the form of human and machine-readable document models, according to the specification tools made available by XML schema, the specification language used by XML.

All document types share the same basic structures, provide support for metadata, addressing and references, differentiate common structure, and may accommodate national peculiarities.

All documents can be produced by the same set of tools (although specialized tools may provide more detailed and specific help in specific situations), need the same tools to be displayed or printed (although specialized tools can provide more sophisticated and individual presentations), can reference each other in an unambiguous and machine-processable way, and can be described by a common set of metadata that assists in indexing, analysing and storing all documents in long-term perspective.

3.4 Metadata schema and ontology

This specification defines a common parliamentary, legislative and judiciary METADATA schema and ontology.

Metadata is structured information about a resource. Metadata records information about a document that is not actually part of its content, but is necessary to examine in order to deal with the document itself (for instance, information about its publication, lifecycle, etc.). Metadata also enables a document to be found by indicating what the document is about and how it can be accessed. Furthermore, metadata facilitates the discovery and use of online resources by providing information that aids and increases the ease with which information can be located by search engines that index metadata. Metadata values are labelled and collected according to a common ontology, i.e. an organized description of the metadata categories that describe the resources. A shared ontology is fundamental to providing a way for managing, organizing and comparing metadata.

The parliamentary, legislative and judiciary ontology is concerned particularly with records management and document management, and covers the core set of data elements needed for the effective management and retrieval of official parliamentary, legislative, and judiciary information. The aim of the parliamentary, legislative and judiciary ontology is to provide a universal schema for all the information about a document that is available to its owner, does not belong to the document itself, and might be needed for management or searching. The Akoma Ntoso ontology provides direct translation of some of its values into the corresponding properties of the Dublin Core metadata schema (an international standard for the description of electronic documents available online), and uses values and terms drawn from the legal thesarus to improve searchability by legal professionals.

Nonetheless, the ontology is designed to be extensible so that parliaments and courts with different, or more specific, metadata needs may add extra elements and qualifiers to meet their own requirements.

3.5 Schema for citation and cross referencing of documents

This specification defines a mechanism for citation and cross referencing of data between documents.

The Akoma Ntoso naming convention and the corresponding Akoma Ntoso reference mechanism are intended to enable a persistent, location-independent, mechanism for resource identification and active referencing. The adoption of a schema based on the naming convention allows the full automation of access to documents in a fully distributed hypertext.

The naming convention can provide for:

- the direct access to the document being referred to, regardless of type, jurisdiction, country, or emanating body.
- the specification of the existence, at a certain time, of more than one copy of the same document being referred to;
- the possibility that references to resources not yet published on the web are present.

Official documents, bills, laws, acts, and Judgment s contain numerous references to other official documents -Judgments, bills, laws, and acts. The whole parliamentary, legislative and judiciary corpus of documents can be seen as a network, in which each document is a node linking, and linked by, several other nodes through natural language expressions. The adoption of a common naming convention and a reference mechanism to connect a distributed document corpus, like the one embodied by the parliaments and courts, will greatly enhance the accessibility and richness of cross references. It will enable comprehensive cross referencing and hyper-linking, so vital to any parliamentary, legislative and judiciary corpus, from:

- debate record into legislation
- section of legislation to section of legislation in the same act
- section of legislation to section of legislation in another act of the same Parliament or of an institution like the Pan African Parliament or European Parliament;
- from judgments to other judgments and acts.

4 Design issues

4.1 Simple data model

4.1.1 Akoma Ntoso XML-Schema

Defining an XML language goes through four different specifications:

- The *namespace*, i.e., the official and unambiguous identifier and name of the language (in Akoma Ntoso, that is http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13).
- The *vocabulary*, i.e., the set of reserved words that will be used for the language. In XML the vocabulary is used to specify the name of elements and attributes of the language. Currently, Akoma Ntoso defines 137 names for elements and 61 names for attributes and it uses the lower camel case naming convention for both elements (e.g. mainBody, amendmentList) and for attributes (e.g. showAs, refersTo).
- The *grammar*, i.e., the rules that are used to build a correct (or, in XML, valid) instance of a document in the XML language being defined. The grammar is composed of rules that dictate what content is legal to appear within any element (which is called the content model), both in terms of other elements and characteristics of the text itself.
- The *semantics*, i.e., the mapping between the vocabulary and rules being used in a valid document, and the actual meaning inferable from its markup. The semantic of an XML markup is absolutely dependent on the kind of use the markup document is subject to (often called the downstream application). For ensuring multiple different uses, both by humans and computer applications, declarative semantics is preferred, where by declarative we refer to the description of the element as declaring the content as it is in terms of structure, role or purpose, rather than as it should be handled by any specific downstream application.

This 4-part distinction is explicit in Akoma Ntoso, and is used to ensure long life and widespread usefulness to all documents expressed in this language.

4.1.2 URI/IRI

URIs, or Universal Resource Identifiers, are standard mechanisms for referring to documents, languages and concepts on the World Wide Web. A good URI/IRI has either an identification purpose (i.e., it provides a way to universally refer to that resource in a manner that does not change with time, computer systems or software versions) or a location purpose (i.e., it provides a way for a software or a human to unambiguously and rapidly access the resources wherever it is stored), or, on some situations, both.

Akoma Ntoso gives a lot of importance to URIs, and provides systematically specific URIs for all documents, concepts of the ontology, and even for the markup language itself. All such URIs are described in the Akoma Ntoso naming convention.

4.1.3 FRBR

The Akoma Ntoso standard defines a number of referenceable concepts that are used in many situations in the lifecycle of legal documents. The purpose of this section is to provide a standard referencing mechanism to these concepts through the use of URI/IRI references associated to classes and instances of an ad hoc ontology. The referencing mechanism discussed in this document is meant to be generic and evolving with the evolution of the underlying ontology.

The most important concepts of the Akoma Ntoso ontology are related to documents that have legal status. All discourse and all description of legal sources can be characterized as referring to one of the four levels of a document as introduced by IFLA FRBR (International Federation of Library Associations (IFLA) - Functional Requirements for Bibliographic Records (FRBR) http://www.ifla.org/VII/s13/frbr/frbr.pdf):

- WORK: the abstract concept of the legal resource (e.g., act 3 of 2005).

- EXPRESSION: any version of the WORK whose content is specified and different from others for any reason: language, versions, etc. (e.g., act 3 of 2005 as in the version following the amendments entered into force on July 3rd, 2006).
- MANIFESTATION - any electronic or physical format of the EXPRESSION: MS Word, Open Office, XML, TIFF, PDF, etc (e.g., PDF representation of act 3 of 2005 as in the version following the amendments entered into force on July 3rd, 2006).
- ITEM: the physical copy of any manifestation in the form of a file stored somewhere in some computer on the net or disconnected (e.g., the file called act32005.pdf on my computer containing a PDF representation of act 3, 2005).

4.1.4 Ontology

In computer science, an ontology is an organized collection of facts and assertions about a specific domain. Ontologies identify a number of classes of relevant concepts and their properties and the relations between these classes. In a properly organized ontology, through classes and properties it is possible to derive (technically, infer) new properties relating instances of the classes even if there are not explicitly present in the description of the instances themselves.

Within the World Wide Web the discipline of ontologies is gaining visibility and widespread adoption, thanks to the initiative called the Semantic Web by the W3C. Within this initiative, several languages have been defined, including RDF, RDF Schema and OWL. Such languages allow specific ontologies to be defined, mixed and interchanged for a wide number of different purposes.

Akoma Ntoso allows a large number of different ontologies to be created in the document it describes, and relies on a specific ontology for many purposes. Rather than defining the ontology of the legal matter being discussed in the legal documents (which could be overly wide and all-encompassing, since the legal matter may be by itself rather wide and all-encompassing), the Akoma Ntoso ontology is about legal documents, which is a narrower and fairly better defined domain. The Akoma Ntoso ontology is therefore centered on the concept of document, which is considered in a very precise way through the specification of the FRBR conceptualization of documents (about which see the next section). Besides the FRBR classes for document, the Akoma Ntoso ontology also lists a number of supporting classes (such as Person, Organization, Place or Event, that are used to provide further meaning to the main classes of the ontology.

4.1.5 Design patterns

Patterns are the abstraction and distillation of past experiences in designing and resolving design problems. They are general and widely applicable guidelines for approaching and justifying design issues that often occur in XML-based projects.

In Akoma Ntoso, patterns are used to create categories of content models (and thus correspond to only those content models that have been found to be actually useful) and, more generally, in schema design (and thus correspond to guidelines on how to make the schema more modular, flexible, and understandable to by users). Both approaches are well known and well established in the literature, although by different experts in different ways.

4.1.5.1 Categories in content model

Categories of content models is the term used within Akoma Ntoso to refer to families of elements that share the same conceptual organization of the internals. The Akoma Ntoso schema uses six categories of content models. This means that all content models and complex types used in the schema follow precisely the form of the relevant category, and all elements can be simply described and treated according to their category rather than individually.

These categories are:

The *markers*: markers are content-less elements that are placed here and there in the document and are meaningful for their position, their names and their attributes. Markers are also known as empty elements or milestones. There are two main families of markers in the Akoma Ntoso schema: placeholders in the text content (e.g., note references) that can appear in any position that also has text, and metadata elements that only appear in some subsection of the <meta> section. In Akoma Ntoso, all metadata

elements are markers, so that metadata values are not part of the text content of a document, but rather become attribute values.

The *inlines*: an inline element is an element placed within a mixed model element to identify a text fragment as relevant for some reason. There are both semantically relevant inlines and presentation oriented inlines. There is but one content model using inlines (and markers), which means that all mixed model elements (i.e., those that allow both text and elements) also allow a repeatable selection of all inline elements. For a discussion of why this is only a trade-off decision, and not the ideal solution, see the discussion at the end of this section.

The *blocks*: a block is a container of text or inlines and placeholders that is organized vertically on the display (i.e., has paragraph breaks). Most blocks in Akoma Ntoso are based on the HTML language. There is only one content model that uses blocks, and it allows a repeatable selection of all available blocks. This means that wherever any block is allowed, all blocks are allowed, as well: e.g., wherever a paragraph is allowed, a table or a list is also allowed.

The *subFlow*: a subFlow element is an element placed within a mixed model element to identify a completely separate context that, for any reason, appears within the flow of the text, but does not belong to it or does not follow its rules. subFlow elements are containers appearing in the middle of sentences but containing full structures (with no direct containment of text or inline elements).

The *containers*: containers are sequences of specific elements, some of which can be optional. Containers are all different from each other (since the actual list of contained elements vary), and so there is no single container content model, but rather a number of content models that share the same conceptual category. The shared characteristic of containers, is that no text is allowed directly inside them, but only a collection of other elements. Text therefore can only be placed within a block within the container.

The *hierarchy*: a hierarchy is a set of sections nested to an arbitrary depth, usually provided with title and numbering. Each level of the nesting can contain either more nested sections or a container. No text is allowed directly inside the hierarchy, but only within a block element that is contained within a container element (not considering, of course, titles and numbering). Akoma Ntoso uses only one hierarchy, with predefined names and no constraints on their order or systematic layering.

There are two exceptions to the systematic use of patterns:

- The <li> element allows both inlines and other nested lists (
). The pattern would require elements to contain only text, and nested lists to be direct child of the main list. Since this goes against universal HTML practice, we have decided against full pattern adherence and in favor of HTML tradition.
- There are some inline elements that only make sense in the preface and/or preamble of the document: for instance are <docTitle>,<docNumber> , for numbered documents such as acts or bills, or , for judgments. They are, in fact, part of the one inline content model and thus are available everywhere in the document. There is no simple way to define blocks within <preamble> and <preface> to allow these elements and blocks elsewhere to reject them, so it has been decided that it is better to allow them everywhere rather than uselessly complicating the schema.

4.1.5.2 Patterns in schema design

Design patterns are distillation of common wisdom in organizing the parts and the constraints of a schema. Some of them are listed in http://www.xmlpatterns.com/. Whenever there has been a design choice to be made that was not immediately obvious and naturally acceptable, a relevant pattern has been sought and properly used. In fact, http://www.xmlpatterns.com/ also contain immediately obvious and naturally acceptable patterns that have been used in Akoma Ntoso, but only the not-so-obvious and not-so-natural ones have been explicitly mentioned and referred to. You can find the relevant references in comments within the schema itself, and in the documentation.

4.2 Widest scope

4.2.1 Support for all the types of legal documents

Akoma Ntoso provides explicit support for many different document structures within the context of parliamentary and judiciary activities: legislative documents (e.g. bills, acts, etc.), amendment documents (e.g. amendment), parliamentary documents (e.g. debates, hansard, report, etc.), judiciary documents (e.g. judgments), collection documents (e.g. Official Gazette, etc.), general document (e.g. annexes, memorandum, etc.).

Depending on the way the information is organized within the documents corresponds to various typologies of documents.

Akoma Ntoso Document Types	**Category / Legal Document**	**Definition**
bill/act	*Akoma Ntoso type :* hierarchicalStructure *Legal Document:* bill/act/ordinance/decree/subsidiary legislation, etc.	These are deliberative documents produced by parliamentary activities or from other empowered bodies (e.g. Committee). They are usually drawn up according to a hierarchical structure in which the text is subdivided into sections or chapters. These are subdivided into clauses or articles, sub-paragraphs, etc.
debate	*Akoma Ntoso type:* debateStructure *Legal Document:* debate record/Hansards	These are texts resulting from the transcription of the parliamentary works. The structure reflects the different section of the debates and alternation of questions and answers that takes place during the parliamentary works
debateReport	*Akoma Ntoso type:* debateStructure *Legal Document:* committee minutes	These are texts that are minutes or reports usually of the committee used to describe official meeting sessions. .
judgment	*Akoma Ntoso type* judgmentStructure *Legal Document:* judgments//case-law/precedents	These are documents in which a court of law makes a formal decision or specific determination following a lawsuit. The structure reflects typical narrative of sentences.
doc	*Akoma Ntoso type:* openStructure *Legal Document:* any other type of document/Executive SummaryMemorandu	These are texts that are legally valid but do not have any particular structure. These include any parliamentary procedure document that has no particular textual structure and is not a collection of other documents. An example could be also the Report of the Amendments of a Bill, the Memorandum

	m/etc annexes/table	of a Bill, Order of Business, Legal Notice, etc.
documentCollection	*Akoma Ntoso type* collectionStructure *Legal Document:*	Used to represent documents which are collections of other independent documents. A typical example is the electronic folder related to a bill. This folder is composed by several independent documents (committee reports, initiative, bill, memorandum, etc.) and by different expressions over time such as versions of the same bill. Another example is the U.S. Code: it is a documentCollection composed by various Titles of positive and non-positive law. In European institutions, the committee report, for example, can be considered as a document collection, as it includes documents like Resolutions, Explanatory Memorandum or Opinions from other committees.
amendmentList	*Akoma Ntoso type* collectionStructure	Used to represent a special document that includes all the amendments, collected and submitted to the official deliberative body for the discussion.
officialGazette	*Akoma Ntoso type* collectionStructure	Used to represent an issue of an official publication body such as Official Gazette, Journal, Bulletin or Federal Register.
amendment	*Akoma Ntoso type* amendmentStructure *Legal Document:* Amendment document	Used to describe specific amendment documents. It is a special document or a component of an amendment list, presented by the member(s) of parliament to the committee or to the assembly for discussion and vote.
statement	*Akoma Ntoso type* openStructure *Legal Document:* resolution	Used to represent those legal documents that not have a prescriptive power, but they are fundamental for the life of an official institution. An example is the resolution issued by the Congress that celebrates some special event, or a declaration. Other examples are the resolution or decision from European Parliament.
portion	*Akoma Ntoso type* portionStructure *Legal Document:* chapter of a document	Used to represent a portion of any document at manifestation level.

4.2.2 Support for all the uses of legal documents

Akoma Ntoso is designed for use in all applications that use legal documents. This includes applications both inside and outside the deliberating bodies that make the law. Akoma Ntoso includes, without being limited to, support for:

- the initial drafting of bills;
- the legislative lifecycle including amendments, publication in the official gazette, and the recording of debates;

- the comparison between different version of the bill;
- the enactment and consolidation of those bills to produce the law;
- the codification, recasting, coordination of the acts when some changes are issued;
- the publication of the law and comparison between two different versions of the same law; and
- applications that involve the research and tracking of laws and legislation.

Akoma Ntoso also gives to the applications a representation of case-law, precedents, and judgments including those produced by the Constitutional Court that can affect the law.

4.2.3 Support for all the actors dealing with legal documents

Legal documents are important to many different people and organizations. These range from the people who originally request or propose new laws, the person tasked with drafting the legislation, the legislators who sponsor and debate the legislation, the people who want to alter that legislation, the person who signs the legislation into law, and the people affected by the resulting law. Akoma Ntoso provides support for this diverse group of actors involved in the legislative process.

4.2.4 Support for all the processes affecting legal documents

There are numerous processes that involve legal documents. Some processes within governments or institutions involve the production and issuance of legal documents. Other processes, by other government agencies or external entities interested in following or conforming to the law, involve the tracking and consumption of legal documents. Akoma Ntoso is designed to support all the processes that involve legal documents, whether it be the initial drafting of legislation, the process that results in the enactment of laws, or the follow-on processes to track and comply with those laws.

4.2.5 Support for the characteristics of legal documents in all countries and jurisdictions

Every country and every jurisdiction has unique requirements. This is a simple consequence of separate development of legal traditions around the world over time. However, upon further examination, it is quickly apparent that all the varying traditions found around the world stem from a relatively small set of legal traditions originating back in history. Akoma Ntoso has been designed, through careful examination of the world's legal practices, to take advantage of the common heritage found in all our legal systems while also providing enough flexibility to adapt to all the variations.

4.2.6 Support for all legal documents of the past and of the future

It is important that a legal data model support not only the future needs of legal information systems but also the past. Akoma Ntoso is designed to anticipate the future needs made possible by a uniform standard for legal documents while also being flexible enough to adapt to past practices, allowing all the variances that have occurred in the past to be modeled in a single document structure.

4.2.7 Long term preservation

Dematerialized legal documents modeled and represented in XML preserve their legal validity over time, maintaining a clear separation between original content (as formalized in the enactment stage) and the reworking of that text during the reporting process. This allows us to include a digital signature in the XML document, thus freezing authenticated documents, even digital ones, so that it can be represented in the future without subsequent modifications.

4.2.8 Self-explanation

It should be possible to understand the markup of a legislative document without having to first study and understand the associated schema or having to possess any knowledge of any special theory behind the design. So the vocabulary should be as close as much as possible to the legal domain terminology, but it should be as much as possible neutral with respect to any legal specific tradition.

4.2.9 Self-containment

A good legal XML schema must encapsulate knowledge in one self-contained document without fragmentation in the logical schema of a database or document processing application. This preserves a document's neutrality with respect to applications, platforms, and technological developments. It also keeps intact the expressive power of the legal knowledge contained in the document so that the document can move freely throughout the network.

4.3 Strong distinction between authors and editors

The first important point is the explicit and complete separation between the role of authors (deciding and writing the actual content in terms of sentences, words, and punctuation) and of editors (deciding and organizing the final layout and publication of the document). We often say that the author has created the content and the editors have created the metadata. Another way to put it is that the author is the creator of the FRBR Expression, and the editors are the creators of the FRBR Manifestation.

In the field of legal publishing, the author often is an abstract concept (e.g., the legislator), whose content is the result of a formal action (e.g., a final vote of approval for a highly discussed text), while editors may may be involved at all stages of the publication process. In this regard, the identification of what constitutes the content and what is an editorial addition is in many cases subtle and difficult to establish. A rule of thumb is to try to determine the state of the document at the moment it left the hands of the author and was taken in by the editors. For instance, even the publication of the document on the official gazette does not determine clearly the "official" content. Some published data (such as, for instance, the number of the gazette itself) were not in the hand of the official authors and as such should be considered metadata and not content.

This basic distinction generates, on the other hand, a few secondary reflections that need to be discussed briefly.

4.3.1 The official form is the guarantee of the authorial intention

Many types of legal documents have a "more important" form of publication than others. We will call this the authoritative (or official) form. More often than not, this is a version of the document printed on paper and published within official channels (e.g., the official gazette) after a number of well-known and highly controlled editorial steps. All conversions into electronic formats, by their very nature, have an authoritative status that is of lesser authoritativeness than the official form. Any doubt arising about the correctness of its content should therefore be redeemed by comparing the content of the electronic format with that of the authoritative form, which remains the guarantee of the authorial intention.

4.3.2 Markup is an editorial process

Markup is the act of adding annotation and labels to the fragments of a document in order to allow computer-based processes to be carried out (from publication to print to storage to technical analysis, etc.).

The markup process is the process of actually adding these annotations and labels to the original text according to a specific syntax that is dictated by the computer environment (in the case of Akoma Ntoso, this means adding XML tags around the text fragments that have been identified and classified).

Of course this means adding to the original content, and in this sense, according to the definitions above, it has to be considered an editorial process and not an authorial process.

4.3.3 Naming is an editorial process

Akoma Ntoso defines a series of rules for giving a name (technically, a URI) to all the electronic versions of the legislative documents -the Akoma Ntoso naming convention. For these electronic versions to work correctly within the applications that make use of the Akoma Ntoso standards, it is necessary that the URIs are correctly determined. Since these URIs, although in many ways derived from them, do not look absolutely like the "official" or the "most used" names for these documents, they are defined by the creators of the XML representation, and as such are editorial in nature. Nonetheless, it is of the uttermost

importance that they are created correctly and precisely according to the Akoma Ntoso naming convention.

4.3.4 Metadata items are editorial additions

Editors (i.e., the creators of the FRBR Manifestation) have two main tasks in the production process of Akoma Ntoso documents: on the one hand to identify and label (i.e., mark up) the fragments of the original content according to their role and structure, and on the other, to provide additional information about the document itself that is not contained in the official text as created by the original author.

Collectively, this additional information is called metadata. Since these are metadata elements, and since they are added at markup time, their specification is an editorial process, and not an authorial process, and come under the responsibility of the creator of the markup.

4.4 Descriptive markup and prescriptive markup

Another pillar of Akoma Ntoso is that it is both descriptive and prescriptive. By descriptive we mean a standard that accurately describes with tags the document's various organizational functions (articles, chapters, sections, headers, etc.), allowing an expert to read the document under the guidance of the vocabulary used to enclose the text into sections.

A standard is descriptive when it uses a vocabulary of tags representing the domain where it should be applied. The tags are selected by domain experts, not by computer technicians, so that the tags enable the markup to convey the true semantic meaning they contain.

A standard is prescriptive when it defines the tags' coercive behavioral rules, thus determining not only the vocabulary but also how it should be applied. In legal drafting, we usually deal with codes of rules that define behaviors and conventions for the correct formation of laws: in a prescriptive XML standard, these rules can be translated into technical delimitations included in the standard itself to facilitate compliance with the rules of legal drafting. For example, an XML document consisting of articles could be set-up in such a way that articles will always have a unique number; i.e. paragraphs are sequentially numbered and the structure is hierarchical. Otherwise, the XML document will not be standard-compliant; hence it will not be valid.

For example, a legislative official can open an XML document marked in Akoma Ntoso and, without knowing anything about XML, guess the function of each of the document's parts that are referred to with tag names which matter to the expert and not to the computer technician. On the other hand, other standards have chosen to use technical terminology and vocabulary where the item is not enclosed within tags such as `<article>`, but are enclosed within more neutral terms such as `<paragraph>` or `<block>`.

Secondly, Akoma Ntoso uses its own schema to provide a set of rules for good regulations requiring a minimum set of quality links (e.g., numbering the articles). Thanks to this feature, tools can verify the correct composition of legislative text.

4.5 Content, Structure, Semantics, Presentation

Akoma Ntoso maintains four levels - clearly and strongly separated for the representation and description of legal documents:

- Content: what exactly was written in the document (e.g. the text);
- Structure: how the content is organized (e.g. articles, chapters, etc.);
- Semantics: the conceptual framework of knowledge needed to understand the document (e.g. for understanding what is the <def> you need to know what is a definition in the juridical domain and to combine the term to an ontological class);
- Presentation: the typographical choices to present a document on screen or on paper (e.g. right aligned, bold, italic).

Contrary to other XML-schemas, Akoma Ntoso separates the levels for maintaining the independence of the content from the semantic and from the presentation. In this way it is possible to semantically annotate the same content fragment several times without forcing the user to mark-up the document

again. The same principle applies to the presentation: using the class attribute it is possible to define the semantic approach to the presentation, but the values of those parameters are defined externally to the XML file. This permits changing the layout several times without intervening on the physical XML document. Using XSLT and CSS it is possible to assign a proper presentation to a defined class. For example if we have <title class="bigger right italic bold"> it is possible to define the main characteristics of presentation of the content <title>, but the specific values of these parameters are defined in a CSS (e.g. bigger means size 14, right means on right aligned, and so). When a media needs to have a different presentation only the CSS is properly adapted to the new needs.

4.6 Ability to evolve

A critical characteristic of a successful XML model is its ability to evolve over time. This “evolvability” has been a key concern in the creation of the Akoma Ntoso model. Thus, although the language is built to change over time, the language can be customized at will for local needs and purposes, and still be made compatible with the overall Akoma Ntoso infrastructure and the general language.

Furthermore, the language is built to withstand changes even regarding the number of actual functions provided: features such as the number and type of metadata values, or the automatic generation of amended text, or the activation of special analysis tools on the text that may require the language to evolve in time. In these cases, it can be guaranteed that existing documents already marked up according to initial versions of Akoma Ntoso will be either immediately compatible with the new schemas, or easily convertible to it via a single XSLT stylesheet that is provided.

5 Basic Akoma Ntoso building blocks

5.1 An introduction to document types

As we have seen, the seven document types differ mainly in the way the “main content” of the document is structured. In the table below we describe the main characteristics of the structure of the “main content” part of the different document types.

Document type	Akoma Ntoso main element	Description
bill/act	<body>	The body is used for bills and acts and presents an explicit hierarchy of parts each part of which can be identified with a meaningful name (such as section, tome, etc.) and possibly provided with numbers and various types of headings. Akoma Ntoso provides a large number of names for these parts (title, book, tome, part, chapter, section, paragraph, article, clause, division, list, subtitle, subpart, subchapter, subsection, subparagraph, subclause, sublist, point, indent, alinea). Some legislative traditions may use names which may not match the part names specified above – for such use cases a generic container called an'hcontainer' (i.e. hierarchical container) is provided which can be identified with a name and supports the same hierarchical structures provided by the named parts.
debate record	<debateBody>	The debateBody contain a hierarchy of subdivisions at the bottom of which can be specified blocks of text or individual utterances of individuals participating in the debate, as well as comments from the drafters. Subdivisions are explicitly listed (administrationOfOath, declarationOfVote, communication, petitions, papers, noticesOfMotion, questions, address, proceduralMotions, pointOfOrder, adjournment, rollCall, prayers, oralStatements, writtenStatements, personalStatements, ministerialStatements, resolutions, nationalInterest), plus a generic element debateSection for all unnamed subdivisions and all those subdivision whose appropriate name is not listed here. Within debateSection, individual text structures can be marked up with one of eight containers, speechGroup, speech, question, answer, scene, narrative, summary, and other. It is worth noting that those containers that refer to actual utterances (i.e. speech, question, answer) have a peculiar structure which imposes the identification of a speaker through the from element (which is displayed on the print version of the document) plus references to individuals and roles expressed through the by, as, and

		to attributes, specifying, respectively, the id of the individual uttering the speech, the role (if any) the individual is assuming when uttering the speech, and the addressee (if any) of the speech. For this reason these elements are enriched with special attributes: by: who is the speaker; as: the role of the speaker; to: who is the addresser of the speech. `<question by="#Smith" to="#deputyPresident" as="#member">`
judgment	<judgmentBody>	The judgementBody contains four sections (introduction, background, motivation, and decision - the standard does not mandate an order), that need to be present one or more times as needed. These sections may contain basically any kind of substructure (containers, blocks, hierarchical elements, etc.).
document, debateReport, statement	<mainBody>	The mainContent element of an open structure is a generic collector of all preceding structural elements in any order and number. This kind of open structure is meant for collecting and marking up those document types whose structure is too varied, or too different from the norm, or not well standardized, or too full of exceptions to be worth describing explicitly.
collections	<collectionBody>	The collectionContent is used for including multiple documents that maintain their autonomy, but can be managed as a unique container. It is thus possible to compose an issue of the Official Gazette as a conjunction of several acts. The same for the Amendment List document composed by a set of separate amendment documents. This structure permits two different approaches: 1 to include directly in the collectionBody element the other documents (bill, doc, debate, act, etc.); 2 to include in the collectionBody element references to the documents using the element <documentRef>. The documentRef include the attribute href that specifies the URI/IRI of the document. It is possible to describe the cited document in the same file inside of the element <component> or to link an external file using the URI/IRI convention. `<documentRef eId="dRef_1" href="#bill" showAs="bill"/>` It is possible to have some description or introductory sentences between each document. For this purpose we

		have the <interstitial> element.
amendment	<amendmentBody>	This element includes the body of the amendment that is composed by several important parts: amendmentHeading, amendmentContent, amendmentReference, and amendmentJustification.
portion	<portionBody>	This element permits including a portion of any other document.

5.2 The basic structure of Akoma Ntoso XML resources

The document structures of Akoma Ntoso (bill/act, debate, debateReport, judgment , amendment, statement, and document) have the same external organization: a place for metadata elements, a cover page, a place for the introductory matters (e.g. preface/ preamble or header for Judgments), the main content part of the document (which is different in the four structures), a place for conclusive remarks, and lastly, a place for listing the attachments if any. The table below describes briefly the “text sequence” and their parts:

Text sequence	**Akoma Ntoso <elements>**	**Description**
cover page	<coverPage>	Information intrinsic to the document such as: name of the publisher, serial number, issuing authority, number of committee, number of legislature, number of the session, etc.
information on the document	<metadata>	Information on the document that qualifies and classifies the text as a whole or each fragment. An example is the keywords for assigning the topic to the document (e.g. privacy, commercial law, etc.)
introductory text	<preface> / <header>	Information related to the title of the document, the proponent authority, the identification numbers, the date of approval. In other word, the essential information for citing the document. It also contain, sometime, long title, table of contents.
justificatory text	<preamble> that can includes <formula> <recitals> and <citations>	The introductory part of a document stating its purpose, aims, and justification. Introduction, motivations, purposes, legal basis of a document, in formula, recitals and citations. Formula describes the enacting sentences that, in many legal traditions, are regular and fixed linguistic expressions. Recitals block includes motivations and

		justifications of the legal document. Citations block includes references to other legal documents that are fundamental for the current text : legal basis, preparatory acts as well as the legislative procedure.
main content	<body>: for bill/act <debateBody>: for debate record <judgmentBody>: for judgments <mainBody>: for open structure and for the debate report <amendmentBody>: for the amendment <collectionBody>: for the collection documents <portionBody>: for the portion of document	The main part of the document, the part that is prescriptive or states a declaration (enacting terms). The text is characterized by a structural complexity that can vary depending on the document's typology and purpose.
conclusions	<conclusions>	Part in which we may find closing formulas date and signature.
authorial notes	<authorialNote>	Part dedicated to include the authorial notes added by the author of the document.
attachments	<attachments>	Documents can also include attachments with the precise functionality of completing and integrating the information of the main text. Attachments can be an annex (informative or technical data which, for practical reasons, does not appear in the body). Attachments can also be another act or international agreement that is approved by this act. Those documents are not annexed but attached to the act that approves them.

5.3 An introduction to general elements

All elements in this schema fall under one of five content models: hierarchical container, container, block, inline and marker. Besides named elements, the schema also provides for a generic element for each of them that can be used for markup and that fits the content models but can be specified by a precise name that is not used in this schema. The 'name' attribute must be used for naming the element. The attribute name is required and gives a name to the element.

hcontainer	The hcontainer element is a generic element for a hierarchical container. It can be placed in a hierarchy instead of any of the other hierarchical containers. The attribute name is required and gives a name to the element.
container	The container element is a generic element for a container. It includes elements belonging to the

	block pattern.
block	The block element is a generic element for a container. It can be placed in a container instead of any of the other blocks. The attribute name is required and gives a name to the element.
tblock	The tblock element (titled block) is used to specify a container for blocks introduced by heading elements, similarly to a hierarchical structure
inline	The inline element is a generic element for an inline. It can be placed inside a block instead of any of the other inlines. The attribute name is required and gives a name to the element
marker	The marker element is a generic element for a marker. It can be placed in a block instead of any of the other markers. The attribute name is required and gives a name to the element.

5.4 An introduction to borrowed HTML elements

Akoma Ntoso uses some elements from HTML with similar meaning. For this reason they are reused inside of Akoma Ntoso avoiding inventing new vocabulary. Sometime the semantic are identical (e.g. span) and otherwise it is different (e.g. div).

Name of the element	Group in Akoma Ntoso	Description
div	HTMLcontainers	The element div is an HTML element, but is NOT used in Akoma Ntoso as in HTML. Instead of being used as a generic block, Akoma Ntoso uses div as a generic container (as in common practice). The div is used any time you need to define a container not included in the regular vocabulary. Address: av. Smith Name: mr. Brown
p	HTMLblock	The element p is an HTML element and is used in Akoma Ntoso as in HTML, for the generic paragraph of text (a block)
ul/ol	HTMLblock	The elements ul/ol are HTML element for defining unnumbered or numbered list.
li	HTMLblock	The element li is an HTML item of ul or ol.
table	HTMLblock	The element table is HTML element for defining a table.
th/tr/td/caption	HTMLblock	The elements th/tr/td/caption are

		HTML elements of the table.
span	HTMLinline	The element span is an HTML element and is used in Akoma Ntoso as in HTML, for the generic inline.
b	HTMLinline	The element b is an HTML element and is used in Akoma Ntoso as in HTML, for indicating bold style.
i	HTMLinline	The element i is an HTML element and is used in Akoma Ntoso as in HTML, for indicating italic style.
a	HTMLinline	The element a is an HTML element and is used in Akoma Ntoso as in HTML, for indicating a link to hypertext resources.
u	HTMLinline	The element u is an HTML element and is used in Akoma Ntoso as in HTML, for indicating underline style.
sub	HTMLinline	The element sub is an HTML element and is used in Akoma Ntoso as in HTML, for indicating text as subscripts.
sup	HTMLinline	The element sup is an HTML element and is used in Akoma Ntoso as in HTML, for indicating text as superscripts.
abbr	HTMLinline	Sometime the act is named with an abbreviation. Akoma Ntoso manages abbreviation using HTML element abbr (e.g. FOIA for the "Freedom of Information Act").
br	HTMLmarker	It is the line break used in the HTML definition.
img	HTMLmarker	It is used as pointer for declaring the position where to embed an image in the XML manifestation.

5.5 An introduction to shared elements

Other elements inline are shared by all the type of documents:

date	The date element permits marking up any date in the text and associating a particular meaning using the refersTo attribute. <date date="2013-04-04" refersTo="#signatureDate">four April 2013</date> or to specify the time and zone <date date="2013-04-04T12:00:00" refersTo="#signatureDate">four April 2013</date> The attribute date is used to give a normalized value for a date according to the XSD syntax YYYY-MM-DD or a normalized value for a dateTime according to the XSD syntax YYYY-MM-DDThh:mm:ss(zzzz)
time	The time element is an inline element to identify a time expressed in the text and to propose a normalized representation in the time attribute
person	The person element is an inline element to identify a person expressed in the text and connect he/she to the ontological class
organization	The organization element is an inline element to identify an organization expressed in the text and connect it to the ontological class
concept	The concept element is an inline element to identify a concept expressed in the text and connect it to the ontological class
object	The object element is an inline element to identify an object expressed in the text and to connect it to the ontological class
event	The event element is an inline element to identify an event (e.g. Thanksgiving Day, Royal Assent) expressed in the text and to connect it to the ontological class
location	The location element is an inline element to identify a location (e.g. Montevideo, Senate Palace) expressed in the text and connect it to the ontological class
process	The process element is an inline element to identify a process (e.g. voting of the bill) expressed in the text and to connect it to the ontological class
role	The role element is an inline element to identify a role (e.g. member of assembly, secretary, president, judge, solicitor, etc.) expressed in the text and connect it to the ontological class
term	The term element is an inline element to identify a term (e.g. privacy, IPR, etc.) expressed in the text and to connect it to the ontological class
quantity	The quantity element quantity is an inline element to identify a quantity (e.g. 20 attendees, IPR, etc.) expressed in the text and to connect it to the ontological class
def	The def element is an inline element to identify a definition (e.g. “stalking” is defined as.....) expressed in the text and to connect it to the ontological class
entity	The entity element is an inline element to identify a entity expressed in the text and to connect it to the ontological class

5.6 Metadata

By definition, all metadata is editorial in nature, it is not content, but statements about the content, and as such it is, in its entirety, the responsibility of the editor who marks up the document to provide them. So metadata are **editorial** additions, they are information and values that are *not in the original content of the*

document and that are added to improve comprehension and classification of the document and are essential to make a document “machine readable” since they are meant to provide, together with the markup the understanding and legal knowledge of the documents that “machine” can then use to “read/understand” the document.

Metadata are a way to provide an interpretation of a set of information embedded into the document (*objective interpretation*) - e.g. date of publication - or as an intellectual elaboration of the text (*subjective interpretation*) - e.g. incomplete references. Even if, as a user, you will never see any of the tags or the actual metadata section, it is important to understand its articulation and what scope it serves so that its role can better be appreciated.

At the **metadata level** Akoma Ntoso provides the necessary mechanisms for annotating the text with enriched data collected in;

- a separate block (metadata section) or
- in place in the text (inline elements).

The Akoma Ntoso metadata section provides a separate place for enriching a document with metadata, a place that is clearly identified as such and is dated and authored differently than the content of the text itself.

The metadata elements of Akoma Ntoso are organized in a block called <meta> and inside we find few main sections:

identification:	containing all relevant facts about document, dates and authors. This block also includes translation information when the document is derived by other languages and properties such as the prescriptiveness of the document and the authoritativeness.
publication:	publication metadata
classification:	keyword classification
lifecycle:	list of the events that modify the document.
workflow:	list of the procedural steps necessary for delivery of the document or that have some role in the legislative process.
analysis:	list of the qualification of the provisions and assertions on the text.
temporalData	list of temporal parameters as a set of events (e.g. time intervals of enter into force and time of efficacy).
references:	list of the external resources connected with the document as well as of all individuals, organizations, and concepts that are relevant to understanding the content and the history of the document.
notes:	annotations inserted by the editor or by the author to explain and detail the text content of the document
proprietary:	local and proprietary metadata
presentation	specifications of metadata useful for assisting with the document rendering.

5.6.1 Identification

Akoma Ntoso, unlike everyday language, describes documents according to the Functional Requirements for Bibliographic Records (FRBR) model, a standard nomenclature by IFLA (International Federation of Bibliographic Associations). FRBR is a conceptual entity-relationship model that relates user tasks of retrieval and access in online library catalogues and bibliographic databases from a user's perspective. It represents a more holistic approach to retrieval and access as the relationships between the entities provide links to navigate through the hierarchy of relationships.

Since the most important concepts in Akoma Ntoso are connected to documents, the main part of this section is devoted to detailing the URIs of document-related concepts, and in particular Works, Expressions, and Manifestations. Items are, by definition, outside of the scope of this standard, and are only briefly described. The final part of the section provides a URI-based naming mechanism for non-document entities (as well as for document entities when they are handled in a similar way to non-document entities).

All documents at all levels can be composed of sub-elements, that when combined form the whole document. These are called components and abstractly represent the notion that several independent subdocuments form the whole document as it appears to the reader (i.e., a main body possibly followed by a number of attachments such as schedules and tables):

WorkComponents (e.g., main, schedule, table, etc) - the WorkComponents are abstract entities that can be referenced to refer to different ExpressionComponents in time.

ExpressionComponent (e.g., main, schedule, table, etc.) - the ExpressionComponents represent the visible division of the document as generated by the content author (Parliament, etc.)

ManifestationComponent (e.g., xml files, PDF files, TIFF images, etc.) - the ManifestationComponents represent the division of the document as generated by the manifestation author (e.g., the XML editor).

ItemComponent - the actual files corresponding to the ManifestationComponents.

Other concepts dealt by the Akoma Ntoso ontology also derive from the IFLA FRBR ontology, and include but are not limited to individuals (Person), organizations (Corporate Body), actions and occurrences (Event), locations (Place), ideas (Concept) and physical objects (Object). The full list of such concepts is provided in section 8.8.

The scope of the naming convention is to identify in a unique way all Akoma Ntoso concepts and resources on the network and in general all collections thereof. Some principles and characteristics should be respected in the naming convention:

- MEANINGFULNESS: the name is a meaningful and logical description of the resource and not of its physical path
- PERMANENCE: the name must be permanent and stable over time
- INVARIANCE: the name must derive from invariant properties of the resource so as to provide some degree of certainty in obtaining the same name for the same resource regardless of process, tool and person.
- FRBR concepts are used differently when taking about documents in a variety of situations. In each cases it is important to use the URI/IRI for the correct FRBR level of document. We describe here a few particularly frequent situations:

    1. Legislative references will most probably refer to WORKs: acts referring to other acts do so regardless of the actual version, and references must be to something independent of all possible expressions, e.g., to the work.

    2. The list of attachments and schedules belong to a specific EXPRESSION., so references to ExpressionComponents is specific of the expression level.

    3. Yet the specific Manifestation that is the Akoma Ntoso XML format uses an XML-based syntax to refer to ExpressionComponents, and associate them to the corresponding ManifestationComponents containing the appropriate content. Therefore within XML files the URI/IRI of the Manifestation must be used to refer to all components, including the main document, all attachments and all schedules.

4. Multimedia fragments within an XML manifestation (e.g., a drawing, a schema, a map, etc.) do not exist as independent ExpressionComponents, as they are only a part of some ExpressionComponents (even when they are the only part). In fact they are only ManifestationComponents, and as such are referred to in object and img elements with the appropriate ManifestationComponents URI. Even if the same multimedia content appears in different parts of the content of a Manifestation, each instance of that content must correspond to a different ManifestationComponent, and must be considered independently of the other.

5. It is an Item-level decision, once ascertained that the content is exactly identical, to provide space-saving policies by storing only one copy of the multimedia content. This Item-level decision has no impact on references and names, which are still individually different from each other.

6. Non-document concepts are referred to within the metadata and content of Akoma Ntoso documents. References are always performed in two steps: the first step ties the reference point in the document to an item in the Reference section using internal (and not standardized) IDs; the second step ties the item in the reference section to the actual concept through the URI/IRI of the concept as specified in this document.

The FRBR model offers an excellent framework to deal with legal texts. In legal domain, we've a lot of derivations due to the constant amendments of normative acts.

FRBR identifies four different abstractions about documents that are carefully and clearly differentiated and that relate to each other:

	Bibliographical context	**Legal Context**
work	"Work" is a distinct intellectual or artistic creation at the conceptual level. Qualifying characteristics: **identity** e.g. *Hamlet = work* Regardless of versions, variants, revisions, data formats and location. Even if a "Work" is translated in different languages that have no words in common with the original, it is still the *same document*, the same "work".	"Work" refers to the original "content" of the legal document. *For examples, the abstract concept of the legal resource;* *e.g. act 3 of 2005)*
expression	"Expression" is the specific intellectual or artistic form that a work takes each time it is 'realized. Qualifying characteristics: **content** e.g. *Hamlet original version book = expression* or *Hamlet original version video = expression* All different editions of the same version of the document, all the different data format in which the content of a document can be expressed, all are unified by the fact that they express the same actual content.	"Expression" refers to "form" of the legal document. *For examples, any version of the "work" whose content is specified and different from others for any reason: language, versions, etc.;* *e.g. act 3 of 2005 as in the version following the amendments entered into force on July 3rd, 2006*
manifestation	"Manifestation" is the physical embodiment of an "expression" of a "work". It is a specific form that the document assumes once it takes a concrete representation. Qualifying characteristics: **data format** e.g. *Hamlet original version book – hardback version* or *Hamlet original version video DVD version*	"Manifestation" refers to the realization of the publishing work either on paper or in any electronic format. *For examples, any electronic or physical format of the "expression" MS Word, Open*

	For physical documents, it could be a specific edition as published in a specific choice of paper, binding, typographical characteristics, etc. For electronic documents, it is the choice of a specific data format, process method, and so on.	*Office, XML, TIFF, PDF, etc.;* *e.g. PDF version of act 3 of 2005 as in the version following the amendments entered into force on July 3rd, 2006.*
item	"Item" is one physical copy of a document in a concrete form of a "manifestation" of an "expression" of a "work". Qualifying characteristics: **location** e.g. *Hamlet original version book – hardback version of the Shakespeare Library, London* It could be an individual volume in a bookshelf, or a specific file in a specific directory of a specific computer. Qualifying Characteristic: **positions** or **address**	"Item" refers to a univocally identified exemplar of a certain manifestation. *For examples, the physical copy of any manifestation in the form of a file stored somewhere in some computer on the net or disconnected;* *e.g. the file called act32005.pdf on my computer containing a PDF representation of act 3, 2005*

Akoma Ntoso makes careful use of the FRBR hierarchy of document definitions: a legal document (such as an act), which may assume different content after being revised and amended throughout its useful life, is nonetheless a single work - which gets multiple expressions whenever some specific content is generated (for instance, through an amendment). Each of these expressions has the chance of then being expressed in some electronic form (as a PDF document, or an HTML document, or, in our case, as a specific XML document using vocabulary and grammar from the Akoma Ntoso markup language) thereby generating at least one manifestation. Each physical file where the manifestation is located is therefore an item.

Besides the FRBR levels, an identifier must conform to the URI/IRI syntax and the Akoma Ntoso Naming Convention. While defining a URI/IRI it is important to define

1. the country,
2. the type of the document,
3. the date of the document and, where applicable, also the version,
4. the main language, and also
5. the different parts like annexes, exhibits, table, etc.

In fact, all documents at all levels of the FRBR classification be composed of sub-elements, that when combined form the whole document. These are called components, they abstractly represent the notion that several independent subdocuments form the whole document as it appears to the reader (i.e., a main body possibly followed by a number of attachments such as schedules and tables).

It is important, during the URI/IRI identification, to analyse the structure of the parts of a document in order to separate the logical organization coming from the author (parliament, judge) from the physical organization of the content usually decided by some technical criteria. In other words the work URI/IRI should reflect the original logical structure as organized by the author for preserving over time the original forms and hierarchy of the annexes or of the other material composing the full document. The physical organization can follow different criteria connected to the application purposes or technical choices. So we can find in the URI/IRI of the Work three components but in the Manifestation we can find a unique URI/IRI component for managing document in any easier way.

The Akoma Ntoso language allows names for documents that are free of restrictions and can be used everywhere (except in the markup of references) instead of the corresponding URIs. These names (called aliases in the Akoma Ntoso language) can be specified to record "well-known" natural language names for the document, as well as shortened names or even acronyms commonly used to refer to a document, see in the example below.

identification	<identification source="#oasis">

Work Act n. 10 of 22 November 2011. It is created on the same date by the parliament (author) The Work is composed by two parts: main document and one annex	<FRBRWork> <FRBRthis value="/akn/un/act/2011-11-22/10/main"/> <FRBRuri value="/akn/un/act/2011-11-22/10"/> <FRBRalias name=”long name” value=”Business Development Act no.10 of 22 November 2011”/> <FRBRdate date="2011-11-22" name="Generation"/> <FRBRauthor href="#parliament" as="#author"/> <componentInfo> <componentData eId="wmain" href="#emain" name="main" showAs="Main document"/> <componentData eId="wannex" href="#eannex" name="annex" showAs="Provisions as to the conduct of business of the board"/> </componentInfo> <FRBRcountry value="us"/> <FRBRnumber value="395-2010"/> <FRBRname value="bill"/> <FRBRprescriptive value="true"/> <FRBRauthoritative value="true"/> </FRBRWork>
Expression Version in force at 19 December 2003. The date of creation by a legal expert. 15 January 2012 The author is the parliament. This means version officially approved.	<FRBRExpression> <FRBRthis value="/akn/un/act/2011-11-22/10/eng@2003-12-19/main"/> <FRBRuri value="/akn/un/act/2011-11-22/10/eng@2003-12-19"/> <FRBRdate date="2012-01-15" name="Generation"/> <FRBRauthor href="#palmirani" as="#editor"/> <componentInfo> <componentData eId="emain" href="#mmain" name="main" showAs="Main document"/> <componentData eId="eannex" href="#mannex" name="schedule" showAs="Provisions as to the conduct of business of the board"/> </componentInfo> <FRBRauthoritative value="true"/> <FRBRlanguage language="eng"/> </FRBRExpression>
Manifestation The date of creation is when the editor marks up the document: 2012-01-30.	<FRBRManifestation> <FRBRthis value="/akn/un/act/2011-11-22/10/eng@2003-12-19/main.xml"/> <FRBRuri value="/akn/un/act/2011-11-22/10/eng@2003-12-19.akn"/> <FRBRdate date="2012-01-30" name="Generation"/> <FRBRauthor href="#palmirani" as="#editor"/> <FRBRauthor href="#vitali" as="#editor"/> <componentInfo> <componentData eId="mmain" href="main.xml" name="main" showAs="Main document"/> <componentData eId="mannex" href="annex.xml" name="annex" showAs="Provisions as to the conduct of business of the board"/> </componentInfo> <FRBRformat value="xml"/> </FRBRManifestation>
	</identification>

The expression also includes metadata for capturing the linguistic aspects. In particular `FRBRlanguage` and `FRBRtranslation` permit to creating a relationship among expressions that are the outcome of a translation process. The following example shows that the current document is a translation made by the Paliament (by) from Swahili (fromLanguage), to English (FRBRlanguage), passing through French (pivot).

```
<FRBRlanguage language="eng"/>
<FRBRtranslation href="/ke/act/1997-08-22/3/swa@" fromLanguage="swa" by="#parliament"
pivot="fra"/>
```

The element preservation is the FRBR metadata property containing an arbitrary list of elements detailing the preservation actions taken for the document is the respective level of the FRBR hierarchy. It is fundamental for permitting to understand at each level (work, expression, manifestation). The example below shows the US Government Printing Office package in MODS representation embedded inside of the Akoma Ntoso FRBRManifestation block.

```
<preservation>
    <mods ID="P0b002ee183eb812a" version="3.3"
xsi:schemaLocation="http://www.loc.gov/mods/v3 http://www.loc.gov/standards/mods/v3/mods-3-3.xsd"
xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://www.loc.gov/mods/v3">
        <name type="corporate">
            <namePart>United States Government Printing Office</namePart>
        </name>
        <name type="corporate">
            <namePart>United States</namePart>
            <namePart>Congress</namePart>
            <description>Government Organization</description>
        </name>
        <typeOfResource>text</typeOfResource>
        <genre authority="marcgt">government publication</genre>
        <titleInfo>
            <title>H. RES. 3 (EH) - Engrossed in House</title>
        </titleInfo>
        <physicalDescription>
            <note type="source content type">deposited</note>
            <digitalOrigin>born digital</digitalOrigin>
            <extent>1 p.</extent>
        </physicalDescription>
    </mods>
</preservation>
```

5.6.2 Publication

The publication is a part of the meta block and captures the metadata concerning the publication process. The name of the source (Official Journal), the date (in normal format), the label for the presentation (showAs), the number of the source of publication (number). The publication is mandatory for the act type but not for the bill type of document.

publication	<publication name="Official Journal" date="1980-01-01" showAs="Official Journal of UN" number="234"/>

5.6.3 Classification

The classification section is dedicated to assigning keywords to the document or fragment of the document, on the base of the topic treated in the legal content. The content of the keyword is stored in the attribute value, the dictionary attribute stores the name of the vocabulary used. It is possible to use a

different vocabulary and to use href for connecting the keyword to the fragment of the document (e.g., art_15).

classification	<classification source="#oasis"> <keyword value="humanRight" showAs="Human Right" dictionary="EuroVOC"/> <keyword value="familyLaw" showAs="Family Law" dictionary="EuroVOC" href="#art_15"/> </classification>

5.6.4 Lifecycle

The lifecycle lists all the events that are involved within the chain of modifications of the document. These events modify the expression.

lifecycle	<lifecycle source="#oasis"> <eventRef eId="eventRef_1" date="1997-08-29" source="#ro_1" type="generation"/> <eventRef eId="eventRef_2" date="2003-12-19" source="#rp_1" type="amendment"/> </lifecycle>

5.6.5 Workflow

The workflow blocks lists the events that are involved with the legislative or judiciary or parliament process. A workflow step does not necessarily change the expression. However, when a new expression occurs, we record all the workflow steps connected to it. The following example lists three workflow steps: firstReading, secondReading, thirdReading. In this case, the firstReading did not modify the expression. The secondReading and the thirdReading are connected to their correspondent expression by href (ke/bill/1345/eng@1979-06-13/main – bill URI). We notice that the proprietary tags include local specifications that support the workflow management system import/export of the data.

workflow	<workflow source="#editor"> <step date="2005-01-01" as="#legislator" href="/uk/bill/1345/eng@2004-12-15/main" eId="step_1" outcome="#firstReading" actor="#parliament"> <myTags:proprietary xmlns:myTags="http://myTags.xsd" source="#editor"> <myWorkFlowTags /> </myTags:proprietary> </step> <step date="2005-04-01" as="#legislator" href="/uk/bill/1345/eng@2005-04-01/main" eId="step_2" outcome="#secondReading" actor="#parliament" /> </workflow>

5.7 Analytical metadata

5.7.1 Analysis

The block Analysis includes all the juridical metadata coming from a specific interpretation of the legal source. The Analysis block describes information concerning modifications, restrictions of the normative effects e.g. by jurisdiction limitation, judgment result, qualification of the judgment's citations, parliamentary voting, mapping history concerning the original wId and the current eId.

activeModifications:	Block of metadata for managing the modifications made by the current document to another document.
passiveModifications:	Block of metadata for managing the modifications arrived to the current document.
restrictions:	Block of metadata for managing the limitation of the normative effect, in particular this block permits defining the jurisdiction restrictions.
judicial:	Block of metadata for managing the judiciary metadata such as the qualification of the case-law references and the result of the decision.
parliamentary:	Block of metadata for managing the parliamentary metadata such as the quorum information, the voting results, and the recall data.
mappings:	Block of metadata for managing the changes of ids when a renumbering occurs and also whenever this expression is not the master expression of the document (e.g. linguistic variants with different numbering of the partitions imposed by the translation process).
otherAnalysis	Any other proprietary metadata.

5.7.1.1 activeModifications

In all of the document types it is possible to model the modificatory provisions. Especially in the amendment (official document for proposing modifications to a bill), bill, act, debate (e.g. oral amendment) and doc (e.g. veto of the executive) the modificatory provision is a legal normative statement that disposes modifications to another legal document. In the legal text we model the textual elements (e.g. quotedText, quotedStructure, ref, etc.) and in the meta block activeModification we provide the semantic information like: source of modification, destination of the modification, position where to apply the modification in the destination, action of the modification, temporal parameters, conditions or limitation of the modification, other peculiar parameters for managing special modifications (e.g. renumbering).

The following table provides some examples of textual modifications: repeal, substitution, insertion, split, join, renumbering.

<textualMod>: it provides the type of modification to apply. The attribute @incomplete permits specifying the incompleteness of the information for applying in an automatic manner the modification action (e.g. lack of precision concerning the destination). The attribute @exclusion (values true or false) is a boolean data that indicates applying the modification in a negative manner (e.g. repeal all the articles excluding the present list).

<source>: it provides the idRef to the fragment or portion of the legal text where the modification is expressed;

<destination>: it provides the IRI where the modification should be applied. @pos in the destination element permits specifying some information concerning the precise location where to apply the modification: after, before, end, start, inside, unspecified.

<old>: it provides the idRef of the quotedText or quotedStructure where to find the old text that should be modified;

<new>: it provides the idRef of the quotedText or quotedStructure where to find the new text involved in the modifications;

<previous>: it provides the eId of the partition affected by renumbering as located in the structure in the previous version/expression.

repeal	<textualMod type="repeal" eId="textualMod_1" incomplete="true" exclusion="true"> <source href="~mod_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18/main~art_16"/> <old href="~mod_1__qtext_1"/> </textualMod> The previous XML fragment means: in the bill n. 1055, at 2008-02-25 it is repealed the word "male" (referenced to the text pointed out by the element old) except in art. 16 (the exception is expressed in the @exclusion="true" and so also the @incomplete="true"). NB. Use '~' or '#' in the reference, depending on whether you want to make a *reference to a fragment*, or a *query to a portion*. This remark applies also for the following examples.
substitution	<textualMod type="substitution" eId="activeModifications__textualMod_2"> <source href="~mod_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18~art_16"/> <old href="~mod_1__qstr_1"/> <new href="~mod_1__qstr_2"/> </textualMod> The previous XML fragment means: in the bill n. 1055, at 2008-02-25, art. 16, the old text specified in mod_1_qstr_1 is substituted by the text defined in the mod_1__qstr_2.
insertion	<textualMod type="insertion" eId="activeModifications__textualMod_3"> <source href="#mod_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18/main#art_16" pos="before"/> <old href="#mod_1__qtext_1"/> <new href="#mod_1__qtext_2"/> </textualMod> The previous XML fragment means: <<Insert the new text contained in #mod_1__qtext_2 in the art. 16 before the text contained in #mod_1__qtext_1.>> <textualMod type="insertion" eId="activeModifications__textualMod_3"> <source href="#mod_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18/main#art_16" pos="before"/> <new href="#mod_1__qstr_1"/> </textualMod> The previous XML fragment means: insert a new structure (mod_1__qstr_1) before the art. 16.

join	<textualMod type="join" eId="activeModifications__textualMod_4"> <source href="~mod_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18~art_16__para_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18~art_16__para_2"/> <new href="~mod_1__qstr_2"/> </textualMod> The previous XML fragment means: take the paragraph 1 and the paragraph 2 of the art. 16 and join in the unique element as defined in "new" element or using other elements permitted in the textualMod pattern. For example "new" can contain the number of the new joined partition.
split	<textualMod type="split" eId="activeModifications__textualMod_5"> <source href="#mod_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18/art_16__para_1"/> <new href="#mod_1__qstr_2"/> </textualMod> The previous XML fragment means: take the paragraph 1 and of the art. 16 and slit it following the structure defined in "new" element or using other elements permitted in the textualMod pattern. For example "new" can contain the number of the new splitted partition
renumbering	<textualMod type="renumbering" eId="activeModifications__textualMod_6"> <source href="~mod_1"/> <destination href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18~art_23"/> <previous href="/akn/uy/bill/camera/2008-02-25/carpeta1055-2008/esp@2009-08-18~art_16" eId="activeModifications__textualMod_6_previous"/> </textualMod> The previous XML fragment means: renumber the art. 16 in art. 23 using attribute and elements permitted in the textualMod pattern.
	</activeModifications>

5.7.1.2 passiveModifications

The passiveModifications block records the modifications received from other legal documents or the changes applied to the current version of the document. The passiveModifications provides relevant information to permit the reverse engineering of the changes applied.

passiveModifications	
repeal	<textualMod eId="passiveModifications__textualMod_1" type="repeal" period="~tmpg_1"> <source href="/akn/uy/amendment/senate/2009-09-25/34/"/> <destination href="~art_10__para_1__list_1__point_1"/> <old> <uy:text>por el incumplimiento injustificado de las contrapartidas a que refiere el artículo 8º.</uy:text>

	</old> </textualMod> In this passive modification the Uruguay Parliament added a proprietary element (uy:text) for storing the old text that is repealed in the current version of the document. NB. Use '~' or '#' in the reference, depending on whether you want to make a *reference to a fragment*, or a *query to a portion*. This remark applies also for the following examples.
substitution	<textualMod eId="passiveModifications__textualMod_2" type="substitution" period="#cmp_1__tmpg_4"> <source href="/akn/uy/amendment/senate/2009-09-25/34/"/> <destination href="#cmp_1__docType_1"/> <old> <uy:text>TEXTO APROBADO </uy:text> </old> <new href="#cmp_1__docType_1__ins_1"/> </textualMod> This passive modification models the substitution of the old text in the new text, with particular regard to the modification in the <preface> of the type of document.
insertion	<textualMod eId="passiveModifications__textualMod_3" type="insertion" period="#tmpg_4"> <source href="/akn/uy/amendment/senate/2009-09-25/34"/> <destination href="#art_7__para_3"/> </textualMod> Insertion of the paragraph 3 in the new versioned document.
join	<textualMod eId="passiveModifications__textualMod_4" type="join" period="#tmpg_4"> <source href="/akn/uy/amendment/senate/2009-09-25/34"/> <destination href="#art_6__para_1"/> <old href="/uy/bill/ejecutivo/carpeta/2005-04-04/137-2005/esp@2005-05-02T24:00:00-03:00/bill#art_6__para_2"/> <old href="/uy/bill/ejecutivo/carpeta/2005-04-04/137-2005/esp@2005-05-02T24:00:00-03:00/bill#art_6_para_3"/> <new href="#art_6__del_1"/> </textualMod> This fragment models the join effect on the current document. The destination is the current point in the text where the join was applied. The two old elements provide two original partitions that are joined. The new indicates the point where was deleted the disjunction between the two partitions. We use <del/> for indicating where was applied the conjunction.
split	<textualMod eId="passiveModifications__textualMod_5" type="split" period="#tmpg_3"> <source href="/akn/uy/amendment/senate/2009-09-25/34"/> <destination href="#art_6__ins_1"/> <destination href="#art_6_ins_3"/> <old href="#art_6__para_1"/> <new href="#art_6_ins_2"/> </textualMod> This fragment models the result of a split modification.

	Two destinations are pointed out to the results of the split, in this case two element <ins> that delimitates the result of the divisions. The old represents the partition involved by the subdivision. The new indicates where the split is done (art_6__ins_2).
renumbering	<textualMod eId="passiveModifications__textualMod_6" type="renumbering" period="#tmpg_3"> <source href="/akn/uy/amendment/senate/2009-09-25/34"/> <destination href="#art7__para_2"/> <previous href="/akn/uy/bill/ejecutivo/2005-04-04/carpeta137-2005/esp@2005-05-02/bill#art7__para_3" showAs="previous" eId="previous_1"/> </textualMod> This markup shows the effect of the renumbering on the destination document. The source says where the renumbering come from; destination says the partition affected by the renumbering in the current document; previous describes the previous partition expression ID.

5.7.1.3 restrictions

<restrictions> block contains <restriction> elements that describe jurisdiction specifications and other types of restrictions of normative effectively. Each restriction element associates a TLCConcept identified by a @refersTo attribute to a fragment of the document identified by an href attribute. In the following example we have @href attribute hosting multiple references: art. 12, art. 32, art. 56 for avoiding the redundancy. At the moment only one type of restriction is possible, namely jurisdiction. Other types of restrictions may be specified in future by adding values to the new type restrictionType. This can be used to specify jurisdiction restrictions (frequent, e.g., in UK legislation) to individual fragments of the legislation.

restrictions	<restrictions source="#palmirani"> <restriction type="jurisdiction" eId="restriction_1" refersTo="#jurisdictionEnglandWales" href="#art_12 #art_32 #art_56"/> </restrictions> An alternative representation is the following: <restrictions source="#palmirani"> <restriction type="juridiction" eId="restriction_1" refersTo="#jurisdictionEnglandWales" href="#art_12/> <restriction type="juridiction" eId="restriction_2" refersTo="#jurisdictionEnglandWales" href="#art_32"/> <restriction type="juridiction" eId="restriction_3" refersTo="#jurisdictionEnglandWales" href="#art_56"/> </restrictions> And in the <references> block we have also this specification: <references> <TLCLocation eId="england.wales" showAs="England and Wales" /> </references>

5.7.1.4 judicial

In a judgment document type it is possible to qualify the citation made by the judge supporting his/her thesis and final decision. In the following example, the reference ref_1 supports the judge thesis and it is accessible in the href /it/judgment/2000/123.

The result element expresses the final outcome of the case-law, using the attribute type (in our case approve). The complete list of result is:

- deny
- dismiss
- uphold
- revert
- replaceOrder
- remit
- decide
- approve.

The list of the qualifications for classifying the citations are:

- <supports> : The element supports is a metadata element specifying a reference to a source supported by the argument being described
- <isAnalogTo>: The element isAnalogTo is a metadata element specifying a reference to a source analog to the argument being described
- <applies>: The element applies is a metadata element specifying a reference to a source applied by the argument being described
- <extends>: The element extends is a metadata element specifying a reference to a source extended by the argument being described.
- <restricts>: The element restricts is a metadata element specifying a reference to a source restricted by the argument being described
- <derogates>: The element derogates is a metadata element specifying a reference to a source derogated by the argument being described
- <contrasts>: The element contrasts is a metadata element specifying a reference to a source contrasted by the argument being described.
- <overrules>: The element overrules is a metadata element specifying a reference to a source overruled by the argument being described
- <dissentsFrom> The element dissentsFrom is a metadata element specifying a reference to a source dissented from the argument being described
- <putsInQuestion> The element putsInQuestions is a metadata element specifying a reference to a source questioned by the argument being described.
- <distinguishes> The element distinguishes is a metadata element specifying a reference to a source being distinguished by the argument being described.

judicial	<judicial> <result type="approve"/> <supports> <source href="#ref_1"/> <destination href="/it/judgment/2000/123"/> </supports> </judicial>

5.7.1.5 parliamentary

In an analysis it is possible to track the metadata connected to the parliamentary events recorded in the debate such as the call of quorum, recount of quorum, voting recount, voting.

The following fragment presents a simple example where it is possible to connect the analysis annotation with the text using href attribute and the semantic meaning of the annotation with refersTo attribute.

For example the voting is recorded in a fragment of text in the debate called <summary>. Inside of the summary we have marked up <quantity> and inside of the <voting> metadata we connect the quantities with the respective legal meaning inside of the voting event: 72 votes are “ayes” and 34 votes are “noes” using the refersTo attribute connected with a TLConcept. Before the voting event the <quorum> was checked. Because we have different graduation of quorum, refersTo expresses the type of quorum defined in the TLConcept (e.g. majority).

parliamentary	<parliamentary> <quorumVerification> <quorum eId="quorum_1" refersTo="#majority" value="80"/> <count eId="count_1" refersTo="#present" href="#quantity_1" value="76"/> </quorumVerification> <voting eId="voting_1" href="#summary_1" refersTo="#voting" outcome="#approved"> <quorum eId="voting_1__quorum_1" refersTo="#majority" value="80"/> <count eId="voting_1__count_2" refersTo="#ayes" href="#quantity_2" value="72"/> <count eId="voting_1__count_3" refersTo="#noes" href="#quantity_3" value="34"/> </voting> <recount eId="recount_1" href="# dbsect_2" refersTo="#recount" outcome="#approved"> <count eId="recount_1__count_1" refersTo="#ayes" href="#quantity_3" value="76"/> </recount> </parliamentary> --- in the text --- <debateSection eId=”dbsect_2> <summary eId="summary_1">(Question carried by <quantity eId="quantity_2" normalized="72" refersTo="#ayes">72</quantity> to <quantity normalized="56" eId ="quantity_3" refersTo="#noes">56</quantity> votes)</summary> </debateSection>

5.7.1.6 mappings

The mappings block records the history of the modifications of the original id over time. <mappings> supplies a place where to record the fact that changes in ids do not happen only when a renumbering occurs, but also whenever this expression is not the master expression of the document, i.e., whenever eIds and wIds diverge. The attribute @original stores the first wId, @current stores the eId. The attributes @start and @end link the temporal data.

mappings	<mappings source="#palmirani"> <mapping eId="mapping_1" original="art_1" current="art_4" start="#t1" end="#t3"/> <mapping eId="mapping_2" original="art_1" current="art_7" start="#t4" end="#t7"/> </mappings>

5.7.2 TemporalData

The temporalData describes all the events grouped together in order to model intervals. In the following example we find the <temporalGroup> that models the interval of enter into force and the interval of efficacy. The @refersTo attribute connects the temporal parameters with the TLConcept defined in the references block.

temporalData	<temporalData source="#oasis"> <temporalGroup eId="temporalGroup_1"> <timeInterval refersTo="#inforce" start=" eRef_1" end=" eRef_2"/> <timeInterval refersTo="#efficacy" start=" Ref_1" end=" Ref_2"/>

	</temporalGroup> <temporalGroup eId=" temporalGroup_2"> <timeInterval refersTo="#inforce" start="Ref_2"/> <timeInterval refersTo="#efficacy" start=" Ref_2"/> </temporalGroup> </temporalData>

5.7.3 Notes

The note is a block where we record non-authorial notes. For the authorial notes we use authorialNote tag which is an inline element. The authorial notes are provided by the author of the document. An example of authorial note is the side note (approved by the Assembly) or any note of the Parliament. Any other editorial annotation is included in the tag note.

notes	<notes source="#palmirani"> <note eId="note_1"> Some footnotes from editors. Non authorial note. </note> </notes>

5.7.4 Ontological references

5.7.4.1 References

The reference block models all the references with other documents or with ontology classes (Top Level Classes – TLC). The active references are the normative modifications from the current document to external documents, while the passive references are the external documents that point out the current document because they modify the current document.

<original>: it is the original expression of the Work;

<activeRef>: it is any external document that is modified by the current document;

<passiveRef>: it is any external document that affects the current document;

<attachmentOf>: it is the reference to the main document where the current document is the attachment

<hasAttachment>: it is the reference to any attachment of the current document;

<jurisprudence>: it is any reference to relevant case-law;

<TLCxxx>: it is any reference to an ontological class.

references	<references source="#palmirani"> <original eId="original_1" href="/akn/cl/bill/2005-03-14/315-352/esp@/main" showAs="Original "/> <activeRef eId ="activeRef_1" href="/akn/cl/act/2010/cp/main#art12" showAs="Código Penal"/> <passiveRef eId ="passiveRef_1" href="/akn/cl/act/2010/cp/main#art19" showAs="Código Penal"/> <attachmentOf eId="attachmentOf_1" href="="/akn/cl/bill/2005-03-14/315-352/esp@/.akn" showAs="Complete Collection of Gazette 2005 March"/> <hasAttachment eId=" hasAttachment_1" href="="/akn/cl/bill/2005-03-14/315-352/esp@/annex_A" showAs="Annex A"/> <jurisprudence eId="jurisprudence_1" href="/akn/cl/judgment/2005-01-10/2124" showAs="case-law"/> <TLCOrganization eId ="executivo" href="/ontology/organizations/akn/executivo" showAs="Executivo"/> <TLCRole eId ="pdlr"

	href="/ontology/roles/akn/presidenteRepublica" showAs="Presidente de la República"/> <TLCRole eId ="author" href="/ontology/roles/akn/author" showAs="Author of Document"/> <TLCRole eId ="editor" href="/ontology/roles/akn/editor" showAs="Editor of Document"/> <TLCPerson eId="lagos" href="/ontology/persons/akn/ricardoLagosEscobar" showAs="RICARDO LAGOS ESCOBAR"/> <TLCLocation i eId="TCL" href="/ontology/location/akn/santiago" showAs="Santiago"/> <TLCReference eId=" TLCReference_1" href="/akn/cl/doc/2004/commentOfCivilCode/" showAs="Comment of the Civil Code of Chile" name="book"/> </references>

5.7.5 Additional annotation

5.7.5.1 Proprietary

The proprietary block permits adding any other local additional tags which are useful for managing legacy systems.

proprietary	<proprietary source="#oasis"> <my:tag> any tag useful for the local document management</my:tag> </proprietary>

5.7.5.2 Presentation

The presentation block permits defining tags and specifications that facilitate the visual rendering of the document (e.g. specifications on the paper format, or the numbering of the lines, etc.).

presentation	Example from UK <presentation source="#palmirani"> <my:oddPageHeading> <my:left class="normal"> Legislation Publication Ordinance</my:left> <my:right class="normal"> CAP. 614 </my:right> </my:oddPageHeading> <my:oddPageFooter> <my:left class="normal"> Authorized Loose-left and Printed and Published </my:left> <my:right class="normal"> Issue 47</my:right> </my:oddPageFooter> </presentation> Example from Federal Chancellor of Switzerland: <proprietary source="#palmirani"> <ch:evenPageHeading> <ch:left class="two-third">Iniziativa popolare «Basta con la costruzione sfrenata di abitazioni secondarie!» DF</ch:left> <ch:right class="one-third">RU 2012</ch:right> </ch:evenPageHeading> </proprietary>

One of the main problem in the rendering of XML file is to preserve the format over time and to provide enough information for processing the document in similar manner. In the following example we specify the URL where to get the CSS and also the hash code of the CSS for being sure that the CSS is not modified over time.

presentation	<presentation source="#palmirani"> <uy:myCssForRendering>http://europe.eu/akomantoso30.css</uy:myCssForPreservation> <uy:myCssHash>d7402662a7a744c0b3689dc863e91761</uy:myCssHash> </presentation>

5.8 Table

A table can be included in any type of document. A table element uses the same element children of the HTML table model. It includes also the attribute: border, width, cellpadding, cellspacing, title. Caption element is possible and the content model of the tr element permits including hierarchical elements such as article, section, part, list. This permits modeling particular tables, like the following example, where the amendments are included directly in the table.

The corresponding XML code is following:

```
<table eId="table_1" cellpadding="10" border="1" cellspacing="0" width="100" title="LAWS AMENDED OR REPEALED" >
  <caption>LAWS AMENDED OR REPEALED</caption>
  <tr>
    <th>
      <p>No. and year of law</p>
    </th>
    <th>
      <p>Short title</p>
    </th>
    <th>
      <p>Extent of amendment or repeal</p>
    </th>
  </tr>
  <tr>
    <td>
      <p>Act No. 153 of 1993</p>
    </td>
    <td>
      <p>Independent Broadcasting Act, 1993</p>
    </td>
    <td>
      <blockList eId="table_1__list_1">
        <item eId="table_1__list_1 __item_1">
          <num>1.</num>
          <blockList eId="table_1__list_1 __item_1 __list_1">
            <listIntroduction eId="table_1__list_1 __item_1 __list_1__intro">The amendment of section 1 by the substitution
for the definitions of ‘‘Authority’’, ‘‘chairperson’’, ‘‘Council’’ and ‘‘councillor’’ of the following definitions, respectively:
            </listIntroduction>
            <item eId="table_1__list_1 __item_1 __list_1 __item_a">
              <num>(a)</num>
              <p>‘‘ ‘Authority’ means the Independent Communications Authority of South Africa established by section 3 of the Independent Communications Authority of
South Africa Act, 2000;’’;
              </p>
            </item>
            <item eId="table_1__list_1 __item_1 __list_1 __item_b">
```



```
            <num>(b)</num>
            <p>“ ‘chairperson’ means the chairperson appointed under section 5(2) of the Independent
Communications Authority of South Africa Act, 2000;”;
            </p>
          </item>
          <item eId="table_1__list_1 __item_1 __list_1 __item_c">
            <num>(c)</num>
            <p>“ ‘Council’ means the Council contemplated in section 3(2) of the Independent
Communications Authority of South Africa Act, 2000;”;
            </p>
          </item>
        </blockList>
      </item>
      <item eId="table_1__list_1 __item_2">
        <num>2.</num>
        <p>The amendment of section 2 by the insertion of the following paragraph after paragraph (g):
‘‘(gA) promote the empowerment and advancement of women in the broadcasting services;”.
        </p>
      </item>
      <item eId="table_1__list_1 __item_3">
        <num>3.</num>
        <p>The repeal of section 3.</p>
      </item>
    </blockList>
  </td>
 </tr>
</table>
```

Another use for the table is the application form, where some parts are dedicated to filling parts of the form. Sometime these application forms are schedules of law, regulations, or bills, like the following example.

It is possible with Akoma Ntoso to capture the blank part which permits an easy transformation of the template in an online web application form.

```
<table eId="table_1">
  <tr>
    <td><p>At</p></td>
    <td><p><fillin>.....</fillin></p></td>
    <td><p>on this</p></td>
    <td><p><fillin>.....</fillin></p></td>
    <td><p>day of</p></td>
    <td><p><fillin>.....</fillin></p></td>
    <td><p>19</p></td>
    <td><p><fillin>.....</fillin></p></td>
  </tr>
  <tr>
    <td><p>G.H.,Magistrate.</p></td>
  </tr>
</table>
```

It is also possible to model very complex tables that includes images or irregular cells. We use colspan attribute with the same meaning of HTML.

```
<paragraph eId="sec_2-5-7__para_4">
        <content  eId="sec_2-5-7__para_4__content">
                <table eId="table_1" border="1">
                        <caption eId="table_1__caption">Thermoplastic rooflights and light fittings with
diffusers</caption>
```



```
                        <tr>
                                <th>
                                        <p>

                                        </p>
                                </th>
                                <th>
                                        <p>
                                        Protected zone or fire-fighting shaft
                                        </p>
                                </th>
                                <th colspan="2">
                                        <p>Unprotected zone or protected enclosure</p>
                                </th>
                                <th colspan="2">
                                        <p>Room</p>
                                </th>
                        </tr>
                        <tr>
                                <th>
                                        <p>
                        Classification of lower surface
                                        </p>
                                </th>
                                <th>
                                        <p>
                                        Any  thermoplastic
                                        </p>
                                </th>
                                <th>
                                        <p>TP(a) rigid</p>
                                </th>
                                <th>
                                        <p>TP(a) flexible and TP(b)</p>
                                </th>
                                <th>
                                        <p>TP(a) rigid</p>
                                </th>
                                <th>
                                        <p>TP(a) flexible and TP(b)</p>
                                </th>
                        </tr>
                </table>
        </content>
</paragraph>
```

Or including forms and images:

```
<preface>
   <p class="heading">
      <docTitle>Form XV Public Service Vehicle Licence original REPUBLIC OF KENYA THE TRAFFIC
         ACT</docTitle>
   </p>
</preface>
<mainBody>
   <container eId="container_1" class="table" name="table">
```



```
<p>(Section 97 (1))</p>
<table eId="container_1 table_1">
  <tr>
    <td>
      <p>
        <img src="signalxv.jpg"/>
      </p>
    </td>
    <td>
      <p>
        <fillIn>Cheque No.....</fillIn>
         <fillIn>Cash .....</fillIn>
      </p>
    </td>
  </tr>
  <tr>
    <td>
<p>STATION .....</p>
      <p>ISSUING OFFICER .....</p>
    </td>
  </tr>
```

5.9 Akoma Ntoso alternative to represent a list

Three models can be used to represent a list

1. a list as a hierarchical container
   - the list is marked using the <list> element;
   - the list introduction is marked using <intro> and the list conclusion is marked using the <wrapUp> element.

Each item of the list is a hierarchical container (for example, point or indent)

Example :

```
<list eId="..__list_1" >
  <intro eId="..__list_1__intro" wId="2013-619260-2">
    <p>The Decisions referred to in Article 13(1) shall not impede the
      free movement in the Union and the production, manufacture,
      making available on the market including importation to the
      Union, transport, and exportation from the Union of new
      psychoactive substances:</p>
  </intro>
  <point eId="..__list_1__point_a" wId="2013-619261">
    <num>(a)</num>
    <content eId="..__list_1__point_a__content" wId="2013-619261-1">
      <p>for scientific research and development purposes;</p>
    </content>
  </point>
  <point eId="..__list_1__point_b" wId="2013-619262">
    <num>(b)</num>
    <content eId="..__list_1__point_b__content" wId="2013-619262-1">
      <p>for uses authorised under Union legislation;</p>
```



```
      </content>
    </point>
</list>
```

2. a list as a block

   - the list is marked using the <blockList>
   - the list introduction is marked using the <listIntroduction> element and the list conclusion is marked using the <listWrapUp> element.

Each item of the list is marked using the <item> element.

Example:

```
<blockList eId="..__list_1">
   <listIntroduction eId="..__list_1__intro">The
      Commission conducted an impact assessment of policy
      alternatives, taking into account the consultation of interested
      parties and the results of external studies. The impact
      assessment concluded that the following solution would be
      preferred:</listIntroduction>
   <item eId="..__list_1__item_1">
      <num>–</num>
      <p>a more graduated and better targeted set of restriction
         measures on new psychoactive substances, which should not
         hinder the industrial use of substances.</p>
   </item>
   <item eId="..__list_1__item_2">
      <num>–</num>
      <p>restriction measures should be introduced earlier and
         substances suspected to pose immediate public health risks
         should be subjected to temporary restrictions.</p>
   </item>
</blockList>
```

3. a list as an HTML element

- the list is marked using the <ol> element for ordered list or <ul> for unordered list
- Each item of the list is marked using the <li> element.

Example:

```
<ul eId="..__ul_1">
   <li eId="..__ul_1__li_1">
      <p>a more graduated and better targeted set of restriction
         measures on new psychoactive substances, which should not
         hinder the industrial use of substances.</p>
   </li>
   <li eId="..__ul_1__li_2">
      <p>restriction measures should be introduced earlier and
         substances suspected to pose immediate public health risks
         should be subjected to temporary restrictions.</p>
   </li>
</ul>
```

5.10 Akoma Ntoso alternative to represent a set of provisions

Two models can be used to represent a set of provisions

1. as a hierarchical container

This is the model for the set of sections in the body of an act or a bill.

Example:

```
<chapter eId=",,,__chp_I">
```



```
   <num>CHAPTER I</num>
   <heading eId=",,,__chp_I__heading">Subject matter - Scope -
      Definitions</heading>
   <article eId=",,,__art_1">
      <num>Article 1</num>
      <heading eId=",,,__art_1__heading">Subject matter and
         scope</heading>
      <paragraph eId=",,,__art_1__para_1">
         <num>1.</num>
         <content eId=",,,__art_1__para_1__content">
            <p>This Regulation establishes rules for restrictions to the
               free movement of new psychoactive substances in the internal
               market. For that purpose it sets up a mechanism for
               information exchange on, risk assessment and submission to
               market restriction measures of new psychoactive substances
               at Union level.</p>
         </content>
      </paragraph>
      ...
   </article>
   ...
</chapter>
```

2. as a block

This is used for documents without a well defined structures.

Example:

```
<tblock eId="..__tblock_3">
   <num>3.</num>
   <heading eId="..__tblock_3__heading">LEGAL ELEMENTS OF THE
      PROPOSAL</heading>
   <tblock eId="..__tblock_3.1">
      <num>3.1.</num>
      <heading eId="..__tblock_3.1__heading">The legal base</heading>
      <p>The proposal aims at ensuring that trade in new psychoactive
         substances having industrial and commercial uses is not hindered and
         that the functioning of this market is improved, while the health
         and safety of individuals are protected from harmful substances,
         which cause concern at the EU level.</p>
   </tblock>
</tblock>
```


6 Akoma Ntoso document types

Akoma Ntoso manages seven main families of structure, grouped for function, organization, or role in the legal domain:

- Collection Structure
- Hierarchical Structure
- Debate Structure
- Amendment Structure
- Judgment Structure
- Open Structure
- Portion Structure

A particular attention is devoted to the table that could be included in any type of document.

6.1 Collection Structure

Composite documents are containers of other documents that have their own identity, lifecycle, workflow, and other metadata. An example is the Official Journal or Official Gazette volume where many bills, acts, minutes, reports are collected. Each document is autonomous with its FRBR identification package, metadata, modifications, and temporal information. Nevertheless, the volume of the Journal is an independent work that is composed of other works.

A collection structure is any folder (such as one that contains a bill) that is usually composed of several documents (cover, motivations, commission report, amendments, first draft of a bill, amended bill, etc.).

In this way, it is possible to represent a document composed of different autonomous parts (work or expressions). The following example shows a documentCollection, with the bill (proyecto de ley) and the explanatory part (motivos).

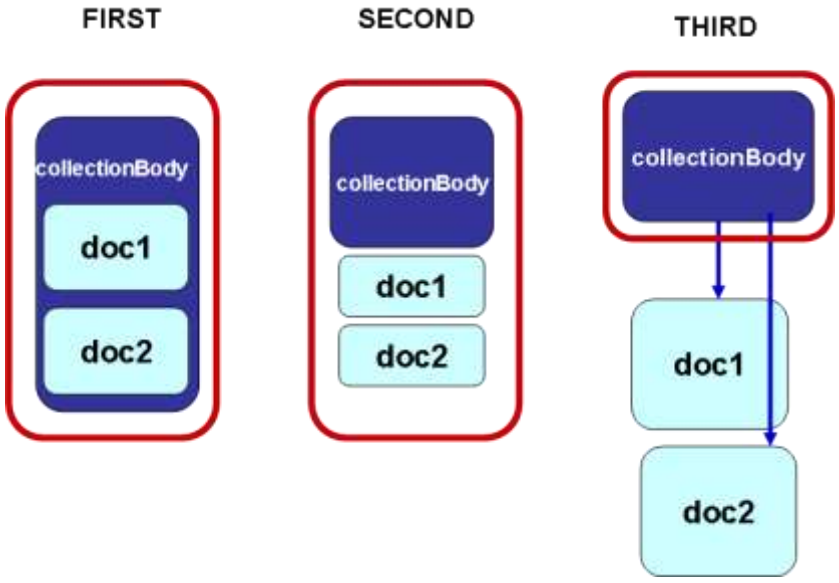
```
<?xml version="1.0" encoding="UTF-8"?>
<akomaNtoso xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http
http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13" xmlns:uy="http://uruguay/propetary.xsd"
  <documentCollection name="collection">
    <!-- Example of Uruguay Bill - Document coming from the Committee, Asunto: 105027;  Carp
    <meta>
    <preface>
    <preamble>
    <collectionBody>
      <!-- The bill is numberd with Carpeta: 395-2010 -->
      <component eId="cmp_1">
        <documentRef eId="dref_1" href="#cmpnts__cmp_1" showAs="Proyecto de Ley"/>
      </component>
      <!-- An Informative part of the document-->
      <component eId="cmp_2">
        <documentRef eId="dref_2" href="#cmpnts__cmp_2" showAs="Motivos"/>
      </component>
    </collectionBody>
  </documentCollection>
  <components eId="cmpnts">
    <component eId="cmpnts__cmp_1">
      <bill name="proyectoDeLey">
    </component>
    <component eId="cmpnts__cmp_2">
      <doc name="motivos">
    </component>
  </components>
</akomaNtoso>
```

We have several documents that belongs to the collection structure. Certain types of documents, such as amendmentLists and officialGazettes, are usually made of several distinct and autonomous documents.

Name	Definition	Structure
DOCUMENT COLLECTION	The type documentCollection is a generic document type for representing any kind of collection container.	Complex structure composed by different works or by different expressions (e.g. different versions of the same bill: one presented in the Chamber of Deputies and another presented in the Senate) A document collection can also be used, for example, to represent an EP committee's report on a bill, containing a Resolution (possibly with an amendments list annexed), a Explanatory memorandum Opinions of other committees..
AMENDMENT LIST	An amendment list is a document listing a series of amendments.	Complex structure including amendments and parts of the text by which an amendments is introduced.
OFFICIAL GAZETTE	An Official Gazette or Official Bulletin	Official publishing source of law composed of an assortment of legal documents (laws, decrees, orders, legal notices, etc.).

6.1.1 Composition of a collection structure

The different documents included in the documentCollection can be represented in three different ways:



1. The documents are embedded in the collectionBody of the documentCollection:

```
<?xml version="1.0" encoding="UTF-8"?>
<akomaNtoso xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13
../schemas/akomantoso30.xsd"
  xmlns="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13">
  <documentCollection name="billPackage">
    <meta>
      ...
    </meta>
    <coverPage>
      ...
    </coverPage>
    <collectionBody>
      <component eId="cmp_1">
        <bill name="bill">
          <meta>,,, </meta>
          <preface>
            <longTitle eId="cmp_1__longTitle">
              The title of the bill
            </longTitle>
          </preface>
          <body>
            ,,,
          </body>
        </bill>
      </component>
      <component eId="cmp_2">
        <interstitial eId="cmp_2__interstitial">
          <p>Any text is in the collection but belongs to no individual document</p>
        </interstitial>
      </component>
      <component eId="cmp_3">
        <doc name="memorandum">
          <meta> ...the metadata of the second document... </meta>
          <preface> ...the preface of the second document... </preface>
          <mainBody> ...the body of the second document... </mainBody>
        </doc>
      </component>
    </collectionBody>
  </documentCollection>
</akomaNtoso>
```

2. The documents are modelled in the components part of the documentCollection:

```
<?xml version="1.0" encoding="UTF-8"?>
<akomaNtoso xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13 ./akomantoso30.xsd"
xmlns="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13">
        <documentCollection name="billPackage">
                <meta>
                        ....
                </meta>
                <coverPage>

                </coverPage>
                <collectionBody>
    <component eId="cmp_1">
                        <documentRef eId="cmp_1__dref_1" href="#bill" showAs="BILL"/>
    </component>
```



```
    <component eId="cmp_2">
      <interstitial eId="cmp_2__interstitial">
        <p>Any text is in the collection but belongs to no indi-vidual document</p>
      </interstitial>
    </component>
    <component eId="cmp_3">
                                <documentRef eId="cmp_3__dref_1" href="#memorandum"
showAs="MEMORANDUM"/>
    </component>

                    </collectionBody>
          </documentCollection>
          <components>
                    <component eId="cmpnts__cmp_1">
      <bill name="bill">
        <meta>,,, </meta>
        <preface>
          <longTitle eId="cmpnts__cmp_1__longTitle">
            The title of the bill
          </longTitle>
        </preface>
        <body>
          ,,,
        </body>
      </bill>
                    </component>
                    <component eId="cmpnts__cmp_2">
      <doc name="memorandum">
        <meta> ...the metadata of the second document... </meta>
        <preface> ...the preface of the second document... </preface>
        <mainBody> ...the body of the second document... </mainBody>
      </doc>
                    </component>
          </components>
</akomaNtoso>
```

3. The documentCollection includes only the <documentRef> specification to external documents that are modeled and represented in separated XML files.

```
<?xml version="1.0" encoding="UTF-8"?>
<akomaNtoso xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13 ./akomantoso30.xsd"
xmlns="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13">
          <documentCollection name="billPackage">
                    <meta>
                              ....
                    </meta>
                    <coverPage>

                    </coverPage>
                    <collectionBody>
    <component eId="cmp_1">
                                <documentRef eId="cmp_1__dref_1" href="/akn/uy/bill/2013-02-10/450/bill"
showAs="BILL"/>
    </component>
    <component eId="cmp_2">
      <interstitial eId="cmp_2__interstitial">
        <p>Any text is in the collection but belongs to no individual document</p>
      </interstitial>
```



```
    </component>
    <component eId="cmp_3">
                                <documentRef eId="cmp_3__dref_1" href="/akn/doc/2013-02-
10/450/memorandum" showAs="MEMORANDUM"/>
    </component>
                </collectionBody>
        </documentCollection>
</akomaNtoso>
```

6.1.2 Recursive Components in DocumentCollection

It is also possible to have a component in the same position as the attachment, at the end of the main document. This permits recursive definition inside of the documentCollection.

The following case shows the usage of this construct.

```
<?xml version="1.0" encoding="UTF-8"?>
<akomaNtoso xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13 ./akomantoso30.xsd "
xmlns="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13"
xmlns:uy="http://uruguay/propetary.xsd">
   <documentCollection name="billPackage">
     <meta>
     FRBR block information
     </meta>
     <preface>
       Preface of the documentCollection
     </preface>
     <preamble>
     Preamble of the documentCollection
     </preamble>
     <collectionBody>
       <component eId="cmp_1">
         <documentRef eId="dref_1" href="#cmpnts_cmp_1" showAs="INFORME EN MAYORÍA Y
PROYECTO DE LEY - FRENTE AMPLIO"/>
       </component>
       <component eId="cmp_2">
         <documentRef eId="dref_2" href="#cmpnts__cmp_2" showAs="INFORME EN MINORÍA Y
PROYECTO DE RESOLUCIÓN - PARTIDO NACIONAL"/>
       </component>
     </collectionBody>
   </documentCollection>
   <components>
     <component eId="cmpnts__cmp_1">
       <documentCollection name="informeDeMayoria" contains="originalVersion">
         <meta>
           ....
         </meta>
         <collectionBody>
           <component eId="cmpnts__cmp_1__cmp_1">
             <documentRef eId="cmpnts_cmp1_dref_1" href="#cmpnts_cmp_1__cmpnts__cmp_1"
showAs="Informe"/>
           </component>
           <component eId=" cmpnts__cmp_1__cmp_2">
             <documentRef eId=" cmpnts_cmp1_dref_2" href="#cmpnts_cmp_1__cmpnts__cmp_2"
showAs="Bill"/>
           </component>
         </collectionBody>
         <components>
```



```
            <component eId="cmpnts__cmp_1__cmpnts__cmp_1">
              <doc name="reporteInformeEnMayoria">
                        ...
              </doc>
            </component>
            <component eId="cmpnts__cmp_1__cmpnts__cmp_2">
              <bill name="bill">
                    ...
              </bill>
            </component>
          </components>
        </documentCollection>
      </component>
      <component eId="cmpnts__cmp_2">
          <documentCollection name="informeMinoriaNacional" contains="originalVersion">
                  <meta>
                    ...
                  </meta>
          <collectionBody>
            <component eId=" cmpnts__cmp_2__cmp_1">
              <documentRef eId=" cmpnts_cmp2_dref_1" href="#cmpnts_cmp_2__cmpnts__cmp_1"
showAs="Informe"/>
            </component>
            <component eId=" cmpnts__cmp_2__cmp_2">
              <documentRef eId="cmpnts_cmp2_dref_2" href="#cmpnts_cmp_2__cmpnts__cmp_2"
showAs="Resolucion"/>
            </component>
          </collectionBody>
          <components>
            <component eId="cmpnts__cmp_2__cmpnts__cmp_1">
              <doc name="reportInformeMinoriaNational">
                ...
              </doc>
            </component>
            <component eId=" cmpnts__cmp_2__cmpnts__cmp_2">
              <statement name="PROYECTO DE RESOLUCIÓN">
                ...
              </statement>
            </component>
          </components>
        </documentCollection>
      </component>
    </components>
</akomaNtoso>
```

6.2 Hierarchical Structure

Any document with a hierarchical structure belongs to this family of documents.

For hierarchical structure we mean a structure organized with higher levels that group basic units, basic units (article, section, etc.) and lower levels inside of the basic unit.

The Akoma Ntoso standard is neutral with respect to the legal drafting techniques of the different legal traditions, providing most of the hierarchical elements for modeling the body structure: book, tome, part, subpart, title, subtitle, chapter, subchapter, section, subsection, clause, subclause, paragraph, subparagraph, division, point, indent, alinea, list, sublist.

For these reasons, the main requirements of structuring legal text are covered.

The following table shows an example how to use of hierarchical elements:

	Anglophone tradition	*French tradition*	*Portuguese tradition*	*Italian tradition*	*Spanish tradition*	*EU tradition (here,only English, French, Spanish)*	*AKOMA NOTOSO*
Higher Division		Tome			Tome		tome
	Part	Partie (codes)	Parte (codes)	Parte	Parte	Part/ Partie parte	part
		Livre (codes)	Livro (codes)	Libro	Libro		book
	Title	Titre	Título	Titolo	Título	Title/ Titre/ Titulo	title
	Chapter	Chapitre	Capítulo	Capitolo	Capítulo	Chapter/ Chapitre Capitulo	chapter
	Subchapter Article (US)	Section (codes)	Secção	Sezione	Sección o Párrafo	Section/ section/ Sección	section
		Subsection (code)	SubSeçcão	Subsezione		Subsection/ Sous-Section/ Subsección	subsection
Basic Unit	Section Rule	Article	Artigo	Articolo	Artículo	Article (rule)/ article/ articulo/	Article/ section/ rule
Subdivision	Subsection	Alinéa	Alineas	Comma	Inciso	unnumbered paragraph/ alinéa / Párrafo[1]	subsection aliena
	Paragraph	Paragraphe	Paragrafo	Paragrafo		paragraph paragraphe Apartado	paragraph
	Proviso						proviso
	Subparagraph					Subparagraph/ sous paragraphe/ Párrafo[2]	subparagraph
							division

	Anglophone tradition	*French tradition*	*Portuguese tradition*	*Italian tradition*	*Spanish tradition*	*EU tradition (here,only English, French, Spanish)*	*AKOMA NOTOSO*
				Lettera	letra	Point/ point/ Letra	list
				Numero	número	Point/ point/ punto	list
	Latin number					Point/ point Inciso	list
						Indent/ tiret guion	list

The list of the hierarchical partitions included in Akoma Ntoso are the following, listed in alphabetic order:

- alinea
- article
- book
- chapter
- clause
- division
- indent
- list
- paragraph
- part
- point
- proviso
- rule
- section
- subchapter
- subclause
- subdivision
- sublist
- subparagraph
- subpart
- subrule
- subsection
- subtitle
- title
- tome
- transitional.

6.3 Debate Structure

The debate structure is dedicated to parliamentary documents such as report of committees, transcript record of the parliament or assembly, Hansard, debates, voting report, roll calling, etc. In particular to these documents is the unstructured format and the fact that they describe a narrative, similar to a script or a screenplay. For these reasons the debateStructure includes particular structures that permits this modeling.

Debate record is similar to a screenplay and so it is mostly composed by sections according with the main topics or actions admitted in the rules of procedure in the assembly:

- administrationOfOath
- rollCall
- prayers
- oralStatements
- writtenStatements
- personalStatements
- ministerialStatements
- resolutions
- nationalInterest
- declarationOfVote
- communication
- petitions
- papers
- noticesOfMotion
- questions
- address
- proceduralMotions
- pointOfOrder
- adjournment
- debateSection.

Each of these container can include the following elements:

- speechGroup: group of speeches in the dialogue;
- speech: speech dialogue;
- question: question dialogue;
- answer: answer dialogue;
- other: other dialogue;
- scene: description of some action performed inside of the assembly like applause, shouting, crying, etc.;
- narrative: narrative part of what happened in the assembly;
- summary: summary of an event like the result of a voting.

In case it is necessary we have also inline element <remark> for making up the type of annotation: “sceneDescription” (e.g. the minority party leaves the room shouting out), “phenomenon” (e.g. raining), “caption”, “translation” (e.g. [Bab’ uNkwinti, are you going to say it in Afrikaans?]).

An example of fragment of debate is blow presented.

```
<debate name="record">
    <meta>...</meta>
    <coverPage>...</coverPage>
    <preface>...</preface>
    <debateBody>
      <debateSection eId="dbsect_1" name="Preliminary">
          <rollCall eId="dbsect_1__rollCall_1">...</rollCall>
          <prayers eId="dbsect_1__prayers_1">...</prayers>
      </debateSection>
      <debateSection eId="dbsect_2" name="Actas">
          <speech eId="dbsect_2__speech_1" by="#Ascencio">
              <from>El señor ASCENCIO (Presidente).- </from>
                    <p>      El señor Secretario dará lectura a los pareos.
                    <remark type="sceneDescription">(Aplausos)</remark>.</p>
                                                              .....
          </speech>
          <narrative eId="dbsect_2__narrative_1" >-Con posterioridad, la Sala se pronunció sobre el
proyecto en los siguientes términos:</narrative>
          <summary eId="dbsect_2__summary_1" >
              <outcome refersTo="#seAbstiene">   -Se abstuvieron los diputados señores:
```



```
            <vote by="#persona">
                <person eId="p3517" refersTo="#GalileaVidaurreJoseAntonio">Galilea Vidaurre José
Antonio;</person>
            </vote>
            </outcome>
          </summary>
          <scene eId="dbsect_2__scene_1" >-Aplausos.</scene>
      </debateSection>
    <debateBody>
```

6.4 Amendment Structure

The amendment structure is dedicated to modeling particular official documents that provide instructions or proposals for modifications to a bill.

Example : amendment of the European Parliament on a proposal from the Commission can be marked as following.

```
<amendment name="amendment">
   <meta>
      <identification source=""> ... </identification>

      <analysis source="http://www.europarl.europa.eu/">
        <activeModifications>
          <textualMod eId="textualMod_1" type="substitution">
            <source href="~mod_1__qstr_2__rec_3"/>
            <destination href="uri:COM proposal/bill(Expression)]~rec_3"/>
          </textualMod>
        </activeModifications>
      </analysis>

      <references source="http://www.europarl.europa.eu/">
          <TLCConcept eId="concept-content-current" href="/concept/content/current"
              showAs="original version of amended fragment"/>
          <TLCConcept eId="concept-content-proposed" href="/concept/content/proposed"
              showAs="proposed version of amended fragment"/>
          <TLCPerson eId="codict_person-id-96835" href="eu.europa.europarl.codict:person/id=96835"
              showAs="Traian Ungureanu"/>
          <TLCPerson eId="codict_person-id-96832" href="eu.europa.europarl.codict:person/id=96832"
              showAs="Pascale Gruny"/>
      </references>
   </meta>
   <preface>
      <container eId="preface__container_1" name="mainDoc">
          <p xml:space="preserve"><docIntroducer><person eId="preface__container_1__person_1"
refersTo="~codict_person-id-96835">Traian Ungureanu</person> and <person
eId="preface__container_1__person_2" refersTo="~codict_person-id-96832">Pascale
Gruny</person></docIntroducer></p>
      </container>
   </preface>

   <amendmentBody>
     <amendmentHeading>
       <block name="amendedAct" xml:space="preserve"><docType>Proposal for a decision</docType>
- amending act</block>
          <block name="amendedAct" xml:space="preserve"><inline name="AMposition">Recital
3</inline></block>
     </amendmentHeading>
     <amendmentContent>
```



```
      <block name="versionTitle" refersTo="~concept-content-current">Text proposed by the
         Commission</block>
      <block name="versionTitle" refersTo="~concept-content-proposed">Amendment</block>
      <block name="changeBlock">
         <mod eId="mod_1" refersTo="~textualMod_1">
            <quotedStructure eId="mod_1__qstr_1" refersTo="~concept-content-current">
               <recital eId="mod_1__qstr_1__rec_3">
                  <num>(3)</num>
                  <p xml:space="preserve">In line with the Inter-institutional agreement of <date
date="2006-05-17">17 May 2006</date> between the European Parliament, the Council and the
Commission on budgetary discipline and sound financial management, <change>EUR 100 million needs
to be reallocated from the existing budget to finance</change> the new European microfinance facility
<change>for employment and social inclusion – Progress</change></p>
               </recital>
            </quotedStructure>
            <quotedStructure eId="mod_1__qstr_2" refersTo="~concept-content-proposed">
               <recital eId="mod_1__qstr_2__rec_3">
                  <num>(3)</num>
                  <p xml:space="preserve">In line with the Inter-institutional agreement of <date
date="2006-05-17">17 May 2006</date> between the European Parliament, the Council and the
Commission on budgetary discipline and sound financial management, <change>in the event that no
additional appropriations are allocated, then</change> the new European microfinance facility
<change>should be financed by reallocating resources from other budgetary sources.</change></p>
               </recital>
            </quotedStructure>
         </mod>
      </block>
   </amendmentContent>

   <amendmentJustification>
     <block name="justificationHeading">Justification</block>
     <p xml:space="preserve">Due to the present financial situation there is a clear need to find the best
financil solution for the new instrument. From this poin of view, there should be furtherconsultations to
find the optimal solution in order for the facility to deliver to its aims.</p>
   </amendmentJustification>
 </amendmentBody>

</amendment>
```

6.5 Judgment Structure

The Judgment structure is dedicated to case-law, precedents, and judiciary decisions.

The structure of those documents varies greatly without a common template, especially the metadata are complex and with a great diversity in each legal tradition and judicial system.

The main legal part of the judgment <judgmentBody> and it is divided in <background>, <introduction>, <motivation>, <decision> containers.

We have also particular inline elements used in the judiciary system:

- <docJurisdiction></docJurisdiction> for marking up the jurisdiction of the case-law;
- <docketNumber></docketNumber> for marking up number of the trial;
- <neutralCitation> for marking up the number assigned by the number used for hamonized the citations in a given judiciaty system (e.g. [2008] ZASCA 134);
- <party refersTo=""></party> for marking up the party;
- <lawyer refersTo=""></lawyer> for marking up the laywer;
- <judge refersTo=""></judge> for marking up the judge;
- <opinion> for marking up the opinion of the each judge;

- <argument></argument> for marking up the argument sentences for supporting the judges legal argumentation and reasoning.

Some relevant metadata are included in the <judicial> metadata block for modeling citations to other legal sources and result of the judgment.

An example of fragment of judgment is blow presented.

```
<judgment name="decision">
		<meta>
			<identification source="#somebody"></identification>
			<publication date="2008-11-30" name="Law Report" showAs="Law Report
Office Journal" number="555"/>
			<classification source="#somebody"></classification>
			<lifecycle source="#somebody">
				<eventRef date="2008-11-26" eId="eref_1" source="ro1"
type="generation"/>
			</lifecycle>
			<workflow source="#somebody">
				<step date="2007-08-23" eId="step_1" outcome="#outcome_1"/>
				<step date="2008-11-05" eId=" step_2" outcome="#outcome_1"/>
			</workflow>
			<analysis source="#somebody">
				<judicial>
					<result type="deny"/>
					<applies eId="applies_1">
						<source href="#ref_11"/>
						<destination
href="/za/judgment/SA491/eng@/main.xml"/>
					</applies>
					<supports eId="supports_1">
						<source href="#ref_12"/>
						<destination
href="/za/judgment/SA490/eng@/main.xml#par12"/>
					</supports>
				</judicial>
			</analysis>
			<references source="#somebody"></references>
		</meta>
		<header>
			<p>
				<party refersTo=""></party>
				<lawyer refersTo=""></lawyer>
				<judge refersTo=""></judge>
			</p>
		</header>
		<judgmentBody>
			<background></background>
			<introduction></introduction>
			<motivation></motivation>
			<decision></decision>
		</judgmentBody>
		<conclusions></conclusions>
	</judgment>
</akomaNtoso>
```


6.6 Open Structure

A document is text devoid of any specific structure. Examples include annexes, tables, schedules, informative material, letters, and memorandums.

Name	Definition	Structure
DOCUMENT	A document is any valid text for which there is no specific structure or document type.	Texts having an open structure. The main body of the text is the main content.

An example of usage of the general document is presented below. It is an annex that has no particular structure.

Appendix 1 **OFFICIALS FROM THE DEPARTMENT OF DEFENCE** Mr. January (Secretary of Defence and Director General of the Department) Mr. February (Deputy Director General and Chief Director of Policy and Planning) Lieutenant General March (SANDF Chief: Corporate Staff)	<preface> <docType>APPENDIX 1</docType> <docTitle>OFFICIALS FROM THE DEPARTMENT OF DEFENCE </docTitle> </preface> <mainBody> <container eId="container_1" name="members" class="memberslist"> <ol eId="container_1__ol_1"> <li eId="container_1__ol_1__li_1> Mr January (Secretary for Defence and Director General of the Department) <li eId="container_1__ol_1__li_2>Mr Feruray (Deputy Director General and Chief Director Policy and Planning) <li eId="container_1__ol_1__li_3>Lieutenant General March (SANDF Chief: Corporate Staff) </container>
1. Introduction The Portfolio Committee on Defence considered the 2007/2008 Budget of the Department of Defence on 22–23 March 2007 as part of its oversight function over the Department of Defence. The report is based on both the budget hearings held on 22 March 2007 as well as the committee deliberations held on 23 March 2007.	<hcontainer eId="hcontainer_1" name="issue"> <num>1. </num> <heading>Introduction</heading> <paragraph eId="hcontainer_1__para_1"> <content> The Portfolio Committee on Defence considered the 2007/2008 Budget of the Department of Defence on 22 -23 March 2007, as part of its oversight function over the Department of Defence. The report is based on both the budget hearings held on 22 March 2007 as well as the committee deliberations on 23 March 2007. </content> </paragraph> </hcontainer> </mainBody>

6.7 Portion Structure

The Portion Structure is a particular template which permits modeling a portion of the normative part of a document. Once modeled, it is possible to refer to the portion inside of another Akoma Ntoso document using the <componentRef> element. This is useful for fragmenting a very long document and for facilitating legal drafting and document management.

A typical example could be the US Code composed by different titles. In the <act> type document we could define this:

```
<body>
        <componentRef src="uri/title1.xml" />
        <componentRef src="uri/title2.xml" />
        <componentRef src="uri/title3.xml" />
</body>
```

In this case, each title has its own meta data block (FRBRManifestation only inside of the FRBR block) but it is not necessary to have a preface, preamble, or annexes, only <portionBody>. Note that the name of the Manifestation is <FRBRuri value="/akn/us/usc/title_9/eng@2013-07-26~chp_3/main.akn"/> and in the FRBRManifestation block it is possible to specify also the portion with <FRBRportion from="chp_3" />. In case of interval, (e.g. from chapter 3 to chapter 5) we also use the attribute upTo=”chp_5” to specify the end of the interval.

```
<?xml version="1.0" encoding="UTF-8"?>
<akomaNtoso xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13
../../schemas/akomantoso30.xsd http://www.w3.org/XML/1998/namespace ../../schemas/XML.xsd"
xmlns="http://docs.oasis-open.org/legaldocml/ns/akn/3.0/CSD13">
   <portion includedIn="/akn/us/act/title_9">
      <meta>
         <identification source="#vergottini">
            <FRBRWork>
               <FRBRthis value="/akn/us/usc/title_9/main"/>
               <FRBRuri value="/akn/us/usc/title_9"/>
               <FRBRdate date="1947-07-30" name="Title 9"/>
               <FRBRauthor href="#olrc" as="#author"/>
               <FRBRcountry value="us"/>
               <FRBRsubtype value="title"/>
               <FRBRnumber value="title_9"/>
               <FRBRname value="title"/>
               <FRBRprescriptive value="false"/>
               <FRBRauthoritative value="true"/>
            </FRBRWork>
            <FRBRExpression>
               <FRBRthis value="/akn/us/usc/title_9/eng@2013-07-26/main"/>
               <FRBRuri value="/akn/us/usc/title_9/eng@2013-07-26"/>
               <FRBRdate date="2013-07-26" name="Chapter 3 of Title 9 (July 26, 2013)"/>
               <FRBRauthor href="#olrc" as="#editor"/>
               <FRBRlanguage language="eng"/>
            </FRBRExpression>
            <FRBRManifestation>
               <FRBRthis value="/akn/us/usc/title_9/eng@2013-07-26~chp_3/main.xml"/>
               <FRBRuri value="/akn/us/usc/title_9/eng@2013-07-26~chp_3/main.akn"/>
               <FRBRdate date="2014-10-07" name="Chapter 3 of Title 9 (July 26, 2013) -- XML
Markup"/>
               <FRBRauthor href="#vergottini" as="generator"/>
               <FRBRportion from="chp_3" />
            </FRBRManifestation>
```



```
        </identification>
        <references source="#vergottini">
          <original eId="title_9" href="/akn/us/usc/title_9" showAs="Title 9"/>
          <TLCRole eId="sevretaryOfState" href="/akn/us/ontology/role/secretaryOfState"
showAs="Secretary of State"/>
          <TLCRole eId="drafter" href="/akn/us/ontology/role/drafter" showAs="Drafter"/>
          <TLCRole eId="editor" href="/akn/us/ontology/role/editor" showAs="Editor"/>
          <TLCRole eId="generator" href="/akn/us/ontology/role/generator" showAs="Generator"/>
          <TLCOrganization
href="/akn/us/ontology/organization/interAmericanCommercialArbitationCommission" showAs="Inter-
American Commercial Arbitration Commission"/>
          <TLCOrganization eId="house" href="/akn/us/ontology/organization/house" showAs="U.S.
House of Representatives"/>
          <TLCOrganization eId="olrc" href="/akn/us/ontology/organization/olrc" showAs="Office of the
Law Revision Counsel"/>
          <TLCPerson eId="vergottini" href="/akn/us/ontology/person/somebody" showAs="Grant
Vergottini"/>
        </references>
      </meta>
      <portionBody>
        <chapter GUID="idd1d2ae15-f639-11e2-8470-abc29ba29c4d" eId="chp_3">
          <num>CHAPTER 3—</num>
          <heading>INTER-AMERICAN CONVENTION ON INTERNATIONAL COMMERCIAL
ARBITRATION</heading>
          <intro>
            <toc>
              <tocItem href="" level="1">
                <span>Sec.</span>
              </tocItem>
              <tocItem href="#sec_301" level="1">
                <span>301.</span>
                <span>Enforcement of Convention.</span>
              </tocItem>
              <tocItem href="#sec_302" level="1">
                <span>302.</span>
                <span>Incorporation by reference.</span>
              </tocItem>
              <tocItem href="#sec_303" level="1">
                <span>303.</span>
                <span>Order to compel arbitration; appointment of arbitrators; locale.</span>
              </tocItem>
              <tocItem href="#sec_304" level="1">
                <span>304.</span>
                <span>Recognition and enforcement of foreign arbitral decisions and awards;
reciprocity.</span>
              </tocItem>
              <tocItem href="#sec_305" level="1">
                <span>305.</span>
                <span> Relationship between the <ref href="/akn/oas/act/1975__b_35/eng@1975-01-
30">Inter-American Convention</ref> and the  <ref href="/akn/un/act/1958NYConvention/eng@1958-06-
10">Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958</ref>.
</span>
              </tocItem>
              <tocItem href="#sec_306" level="1">
                <span>306.</span>
                <span>Applicable rules of <organization
refersTo="#interAmericanCommercialArbitationCommission">Inter-American Commercial Arbitration
Commission</organization>.</span>
```



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                </tocItem>
                <tocItem href="#sec_307" level="1">
                   <span>307.</span>
                   <span>Chapter 1; residual application.</span>
                </tocItem>
             </toc>
          </intro>
          <section GUID="idd1d2d527-f639-11e2-8470-abc29ba29c4d" eId="sec_301">
             <num>§ 301.</num>
             <heading> Enforcement of Convention</heading>
             <content>
                <p> The <ref href="/akn/oas/act/1975__b_35/eng@1975-01-30">Inter-American
Convention on International Commercial Arbitration of January 30, 1975</ref>, shall be enforced in
United States courts in accordance with this
                   <ref href="#chp_3">chapter</ref>. </p>
                <block name="sourceCredit">(Added <ref href="/akn/us/act/pl_101/369/eng@1990-08-
15#sec_1">Pub. L. 101–369, § 1 , Aug.
                   15, 1990</ref> , <ref href="/akn/us/act/stat_104/448">104 Stat. 448</ref> .) </block>
             </content>
          </section>
          <section GUID="idd1d2d52a-f639-11e2-8470-abc29ba29c4d" eId="sec_302">
             <num>§ 302.</num>
             <heading> Incorporation by reference</heading>
             <content>
                <p><mref>Sections <ref href="/akn/us/act/title_9#sec_202">202</ref>, <ref
href="/akn/us/act/title_9#sec_203">203</ref>, <ref href="/akn/us/act/title_9#sec_204">204</ref>, <ref
href="/akn/us/act/title_9#sec_205">205</ref>, and <ref href="/akn/us/act/title_9#sec_207">207</ref> of
this title</mref> shall apply to this chapter as if specifically set forth herein, except that for the purposes
of this chapter “the Convention” shall mean the Inter-American
                   Convention.</p>
                <block name="sourceCredit"> (Added <ref href="/akn/us/act/pl_101/369/eng@1990-08-
15#sec_1">Pub. L. 101–369, § 1 , Aug.
                   15, 1990</ref> , <ref href="/akn/us/act/stat_104/448">104 Stat. 448</ref> .) </block>
             </content>
          </section>
          <section GUID="idd1d2fc3c-f639-11e2-8470-abc29ba29c4d" eId="sec_303">
             <num>§ 303.</num>
             <heading> Order to compel arbitration; appointment of arbitrators; locale</heading>
             <subsection GUID="idd1d2fc3d-f639-11e2-8470-abc29ba29c4d"
eId="sec_303__subsec_a">
                <num >(a)</num>
                <content>
                   <p> A court having jurisdiction under this chapter may direct that arbitration be held in
accordance with the agreement at any place therein provided for, whether that place is within or without
the United States. The court may also appoint
                      arbitrators in accordance with the provisions of the agreement.</p>
                </content>
             </subsection>
             <subsection GUID="idd1d2fc3e-f639-11e2-8470-abc29ba29c4d"
eId="sec_303__subsec_b">
                <num >(b)</num>
                <content>

                   <p> In the event the agreement does not make provision for the place of arbitration or
the appointment of arbitrators, the court shall direct that the arbitration shall be held and the arbitrators
be appointed in accordance with <ref href="/akn/oas/act/1975__b_35/eng@1975-01-30#art_3">Article 3
of the
                      Inter-American Convention</ref>.</p>
```



```
                </content>
            </subsection>
        </section>
        <section GUID="idd1d2fc40-f639-11e2-8470-abc29ba29c4d" eId="sec_304">
            <num>§ 304.</num>
            <heading> Recognition and enforcement of foreign arbitral decisions and awards;
reciprocity</heading>
            <content>
                <p>Arbitral decisions or awards made in the territory of a foreign State shall, on the basis
of reciprocity, be recognized and enforced under this chapter only if that State has ratified or acceded to
the
                    <ref href="/akn/oas/act/1975__b_35/eng@1975-01-30">Inter-American
Convention</ref>.</p>
                <block name="sourceCredit"> (Added <ref  href="/akn/us/act/pl_101/369/eng@1990-08-
15#sec_1">Pub. L. 101–369, § 1 , Aug.
                    15, 1990</ref> , <ref href="/akn/us/act/stat_104/449">104 Stat. 449</ref> .) </block>
            </content>
        </section>
        <section GUID="idd1d32352-f639-11e2-8470-abc29ba29c4d" eId="sec_305">
            <num>§ 305.</num>
            <heading>Relationship between the <ref href="/akn/oas/act/1975__b_35/eng@1975-01-
30">Inter-American Convention</ref> and the  <ref href="/akn/un/act/1958NYConvention/eng@1958-06-
10">Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958</ref>
            </heading>
            <intro>
                <p> When the requirements for application of both the <ref
href="/akn/oas/act/1975__b_35/eng@1975-01-30">Inter-American Convention</ref> and the  <ref
href="/akn/un/act/1958NYConvention/eng@1958-06-10">Convention on the Recognition and
Enforcement of Foreign Arbitral Awards of June 10, 1958</ref>, are met,
                    determination as to which Convention applies shall, unless otherwise expressly agreed,
be made as follows: </p>
            </intro>
            <paragraph GUID="idd1d32353-f639-11e2-8470-abc29ba29c4d" eId="sec_305__para_1">
                <num>(1)</num>
                <content>
                    <p> If a majority of the parties to the arbitration agreement are citizens of a State or
States that have ratified or acceded to the Inter-American Convention and are member States of the
Organization of American States, the Inter-American
                        Convention shall apply.</p>
                </content>
            </paragraph>
            <paragraph GUID="idd1d32354-f639-11e2-8470-abc29ba29c4d" eId="sec_305__para_2">
                <num>(2)</num>
                <content>
                    <p> In all other cases the <ref href="/akn/un/act/1958NYConvention/eng@1958-06-
10">Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958</ref>,
shall apply. </p>
                </content>
            </paragraph>
        </section>
        <section GUID="idd1d32356-f639-11e2-8470-abc29ba29c4d" eId="sec_306">
            <num>§ 306.</num>
            <heading> Applicable rules of <organization
refersTo="#interAmericanCommercialArbitationCommission">Inter-American Commercial Arbitration
Commission</organization></heading>
            <subsection GUID="idd1d34a67-f639-11e2-8470-abc29ba29c4d"
eId="sec_306__subsec_a">
                <num >(a)</num>
```



```
                <content>
                  <p> For the purposes of this <ref href="#chp_3">chapter</ref> the rules of procedure
of the  <organization refersTo="#interAmericanCommercialArbitationCommission">Inter-American
Commercial Arbitration Commission</organization> referred to in <ref
href="/akn/oas/act/1975__b_35#art_3">Article 3 of the Inter-American Convention</ref> shall, subject to
<ref href="#sec_306__subsec_b">subsection (b) of this section</ref>, be those rules as
                    promulgated by the <organization
refersTo="#interAmericanCommercialArbitationCommission">Commission</organization> on <date
date="1988-07-01">July 1, 1988</date> . </p>
                </content>
              </subsection>
              <subsection GUID="idd1d34a68-f639-11e2-8470-abc29ba29c4d"
eId="sec_306__subsec_b">
                <num >(b)</num>
                <content>
                  <p> In the event the rules of procedure of the  <organization
refersTo="#interAmericanCommercialArbitationCommission">Inter-American Commercial Arbitration
Commission</organization> are modified or amended in accordance with the procedures for amendment
of the rules of that Commission, the <role refersTo="#secretaryOfState">Secretary of State</role>, by
regulation in
                    accordance with <ref href="/akn/us/act/title_5#sec_553">section 553 of title 5</ref>,
consistent with the aims and purposes of this Convention, may prescribe that such modifications or
amendments shall be effective for purposes of this <ref href="#chp_3">chapter</ref>. </p>
                </content>
              </subsection>
            </section>
            <section GUID="idd1d34a6a-f639-11e2-8470-abc29ba29c4d" eId="sec_307">
              <num>§ 307.</num>
              <heading> <ref href="/akn/us/act/title_9#chp_1">Chapter 1</ref>; residual
application</heading>
              <content>
                <p><ref href="/akn/us/act/title_9#chp_1">Chapter 1</ref> applies to actions and
proceedings brought under this <ref href="/akn/us/act/title_9#chp_3">chapter</ref> to the extent <ref
href="/akn/us/act/title_9#chp_1">chapter 1</ref> is not in conflict with this <ref
href="/akn/us/act/title_9#chp_3">chapter</ref> or the <ref href="/akn/oas/act/1975__b_35/eng@1975-
01-30">Inter-American Convention</ref> as ratified by the United States.</p>
                <block name="sourceCredit"> (Added <ref href="/akn/us/act/pl_101/369/eng@1990-08-
15#sec_1">Pub. L. 101–369, § 1 , Aug.
                  15, 1990</ref>, <ref href="/akn/us/act/stat_104/449">104 Stat. 449</ref> .) </block>
              </content>
            </section>
          </chapter>
        </portionBody>
    </portion>
</akomaNtoso>
```


7 Levels of Compliance

Akoma Ntoso is a rich standard so it is possible to apply it at different levels of compliance.

Five levels of compliance to the Akoma Ntoso schema have been defined. The technical XML validation is a pre-requirement for compliance.

To be compliant, you must apply the Akoma Ntoso schema presented in this document according to the following table:

★	Level 1:	use the document structure defined in the Akoma Ntoso specification (e.g., preface, preamble, body, conclusion, annexes) for the entire document
★★	Level 2:	use the document structure and naming convention of URI/IRI (FRBR metadata) and IDs defined in the D3 (Akoma Ntoso Naming Convention)
★★★	Level 3:	use the structure and naming convention defined in Level 2, plus basic metadata (see definition below)
★★★★	Level 4:	use the structure, naming convention and basic metadata defined in Level 3, plus advanced metadata (see definition below)
★★★★★	Level 5:	use the structure, naming convention, basic and advanced metadata defined in Level 4, plus enriched semantic elements (e.g. references, location, quantity, term, person, etc.)

To help each institution to find the subset of Akoma Ntoso XML-schema suitable for its needs and requirements, we have developed a sub-schema extractor web service. This web service is able to extract only the part of the XML-schema in which the end-user is interested, and can be accessed from http://akn.web.cs.unibo.it/aknssg/aknssg.html.

For Basic metadata we mean:

1. <identification> part with the FRBR;
2. <publication> part where it makes sense;
3. normative references.

For Advanced metadata we mean:

1. <lifecycle> part;
2. <analysis> part;
3. <workflow> part;
4. <references> part.

The rule of optionality and requiredness of the ids as specified in the “Akoma Ntoso Naming Convention Version 3.0” is as follows:

a) Attribute GUID may be used for all compliancy levels, and no constraint on is syntax is imposed.

b) Documents seeking compliancy level 2 or greater must use attributes eId and wId according to the constraints and rules expressed in section 8 of these notes.

c) Documents seeking compliancy level 1 may use attributes eId and wId, and if they do use them, they must use them according to the constraints and rules expressed in section 8 of these notes.

d) Documents seeking compliancy level 1 and not complying with the constraints and rules for identifiers expressed in section 8 of these notes must not use attributes eId and wId.

8 Conformance

This chapter defines five Akoma Ntoso conformance clauses:

1. A document conformance to a level 1 MUST follow the document structure defined in the Akoma Ntoso specification (e.g., preface, preamble, body, conclusion, annexes) for the entire document;
2. A document conformance to a level 2 MUST follow the document structure defined in the Akoma Ntoso specification (e.g., preface, preamble, body, conclusion, annexes) for the entire document AND naming convention of URI/IRI (FRBR metadata) and IDs defined in the D3 (Akoma Ntoso Naming Convention);
3. A document conformance to a level 3 MUST follow the document structure defined in the Akoma Ntoso specification (e.g., preface, preamble, body, conclusion, annexes) for the entire document; the naming convention of URI/IRI (FRBR metadata) and IDs defined in the D3 (Akoma Ntoso Naming Convention) AND the basic metadata FRBR, <publication>, normative reference;
4. A document conformance to a level 4 MUST follow the document structure defined in the Akoma Ntoso specification (e.g., preface, preamble, body, conclusion, annexes) for the entire document; the naming convention of URI/IRI (FRBR metadata) and IDs defined in the D3 (Akoma Ntoso Naming Convention); the basic metadata FRBR, <publication>, normative reference AND the advanced metadata <lifecycle>, <workflow>, <analysis>, <references>.
5. A document conformance to a level 5 MUST follow the document structure defined in the Akoma Ntoso specification (e.g., preface, preamble, body, conclusion, annexes) for the entire document; the naming convention of URI/IRI (FRBR metadata) and IDs defined in the D3 (Akoma Ntoso Naming Convention); the basic metadata FRBR, <publication>, normative reference; the advanced metadata <lifecycle>, <workflow>, <analysis>, <references> AND inline semantic elements <role>, <person>, <location>, <organization>, <concept>, <term>, <data>.

Appendix A. Acknowledgments

The following individuals have participated in the creation of this specification and are gratefully acknowledged:

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Appendix B. Revision History

Revision	Date	Editor	Changes Made
[01]	[06 February 2013]	[Monica Palmirani]	[Editing of the first version]
[02]	[22 March 2013]	[Roger Sperberg]	[English revision]
[03]	[30 October 2013]	[Grant Vergottini]	[Inclusion of the sessions 2]
[04]	[20 May 2014]	[Veronique Parisse]	[Inclusion of the sessions 7]
[05]	[27 August 2014]	[Monica Palmirani]	[Formatting and inclusion of sessions 5.7]
[06]	[4 September 2014]	[Grant Vergottini]	[English revision]
[07]	[5 September 2014]	[Veronique Parisse]	[Revision of the content and some additional editing]
[08]	[5 September 2014]	[Monica Palmirani]	[Inclusion of examples 6.4 and 6.6, some other information concerning the structure of the partitions.]
[09]	[9 September 2014]	[Monica Palmirani]	[Inclusion of some comments from the Summer School LEX2014 brain storming.]
[10]	[17 September 2014]	[Veronique Parisse]	[Minor errors in the syntax examples]
[11]	[22 December 2014]	[Monica Palmirani]	[Updating of the number of the CSD11 into CSD12 and the date]
[12]	[08 January 2015]	[Monica Palmirani]	[Updating the content according with the CSD13]
[13]	[12 January 2015]	[Grant Vergottini]	[English revision paragraph 6.7]
[14]	[13 January 2015]	[Veronique Parisse	[some typos in the eId and some inclusion of tilde syntax in the internal and external uri]
[15]	[14 January 2015]	[Jeason Wemer]	[editorial revision]
[16]	[14 January 2015]	[Monica Palmirani]	[consolidation of all the revisions]