MACHINE-READABLE IDENTIFICATION AND REPRESENTATION OF JUDGMENTS IN SERBIAN JUDICIARY

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Abstract. Legal informatics is an important discipline for modern public administration. This paper proposes machine-readable identification and representation formats for Serbian judiciary. Firstly, we reviewed available judgment identification mechanisms and representation formats. Then, we described requirements of Serbian judiciary system. Finally, we chose the mechanism and the format that best meet those requirements. The results of this paper will be used for development of software applicable to education in the field of e-government.

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1. Introduction

An access to a database of court decisions can be useful in several ways. Insight into previously rendered court decisions is needed in order to harmonize jurisprudence. It is especially important that younger judges have an insight into decisions made by their older colleagues. In the area of international law, it is particularly troublesome to access decisions of the courts in other countries. Legal scholars use case law in their research, while citizens and businesses should be informed how courts approach certain issues in order not to get fined.

IT has a great potential to simplify access to case law. Before this potential can be fully realized, it is necessary to establish standardized judgment identifiers and standardized judgment structure.

The rest of the paper is structured as follows. Next section reviews available methods for constructing judgment identifiers and XML schemata for their representation. The third section describes how those methods can be applied to judgments made in the Republic of Serbia. In the conclusion, concluding remarks are made and directions of further research are given.
2. Related work

Several judgment identifiers (CELEX numbers, URN:LEX identifiers, ECLI and AKOMA NTOSO URI) and XML schemata for representing judgments (XML schema definition of Supreme court of Western Australia and AKOMA NTOSO) are described in this section. Apart from those schemata, there are other national standards such as Saarbrücken standard for court judgments and Appeal decision format of the State Intellectual Property Office of the People’s Republic of China as well, although those standards weren’t described in detail.

As listed in there are some requirements for identifiers that have to be considered: work level (following the bibliographic theory; identifier has to be a work-level identifier), medium-neutrality (it has to be usable in paper, web or any other environment), vendor-neutrality (identifiers should be court-designated, because the judiciary is the source of all judgments), recognizability by humans (legal practitioner has to be able to recognize and understand the identifier as such), recognizability by computers (representation of an identifier should be human readable and computer readable at the same time), meaningfulness (lawyers should be able to assess immediately the most important aspects of its relevance - court and time period are the most important), error-proof (codes for courts instead of full names, the use of non-alphanumeric characters which are not common to lawyers should be minimized), compliance with international standards or EU practice (existing coding standards should be used - as a minimum, the identifier should be usable within existing technical standards like HTTP and URN), extensibility (ability to support specifying a particular paragraph), suited for encapsulating national identification systems (should be possible for national identification systems to be encapsulated in the new identifier).

2.1. CELEX

In EUR-Lex (service providing legal texts of the EU), each document has its own unique identifier known as CELEX (Communitatis Europeae Lex) number. It is compact and meaningful, its syntax is error-proof, language-independent and technology-neutral.

CELEX numbers are constructed as follows:

- 1 character for the sector number
- 4 digits for the year
- 1 or 2 characters for the document type (as described in )
- 4 digits for the reference number (if the reference number contains less than 4 digits, leading zeros are added)

Sector 6 covers case law. Judgments of the Court of Justice have document type CJ, judgments of the General Court have document type TJ and judgments of the Civil Service Tribunal have document type ‘FJ’. For example, some CELEX numbers for judgments in sector 6 are: 61990CJ0290, 62010TJ0571 and 62009FJ0088.
National case law is available under sector 8. It is intended for decisions concerning EU law decided in the national courts in the Member States. As stated in [4] CELEX numbers for sector 8 are composed of:

- sector number
- 4 digits for year of the decision
- 2 letters for country code
- 2 digits for month of the decision
- 2 digits for day of the decision
- 2 digits in brackets for ordinal number (for distinction when two or more decisions are adopted on the same day in the same country).

For example, CELEX number 82011SI1006(01) represents judgment delivered in Slovenia on date 10/06/2011 and number 82009LT0515(01) represents judgment delivered in Lithuania on 05/15/2009.

When applied to national level, CELEX numbers are not human recognizable and not very meaningful since only date when the judgment was adopted is included and there is a lack of elements of the national identification system. On the other hand, CELEX numbers are vendor and medium neutral, error-proof and computer readable. There is evident limitation of maximum number of judgments per day since there are only two digits available for their distinction. Therefore, application of CELEX numbers should be, as is, only for specific type of judgments.

2.2. URN:LEX

As documented in [10], the URN:LEX identifier has a hierarchical structure as follows:

'urn:lex:'<NSS>

where NSS (namespace specific string) is composed as follows:

<NSS>::=<jurisdiction>"."<local-name>

and where jurisdiction is:

<jurisdiction>::=<jurisdiction-code>[';'<jurisdiction-unit>]*

<jurisdiction-code> is country identification code (according to ISO-3166-1 alpha-2). In case of multi-national or international organizations, Top Level Domain Name or the Domain Name is used (e.g. jurisdiction code of European Union is "eu"). When organizations do not have registered domain, virtual domain 'lex' is used (e.g. jurisdiction code of the European Economic Community is "eec.lex"). <jurisdiction-unit> is possible administrative hierarchical substructure. It is useful when the same bodies may be present in two or more jurisdiction levels. <local-name> is the uniform name of the source of law and its general structure is as follows:
<local-name>::=<work>[@<expression>]?['$'<manifestation>]?  

The structure of the local name at the work-level is:

<work>::=<authority>"."<measure>"."<details>["."<annex>]*

In the case of judgments, <authority> represents the court, <measure> indicates type of measure (i.e. judgment) and <details> typically refers to judgment date and number. For instance, identifier:

urn:lex:ee.c:court.justice:judgment:1960-04-04;4-59

refers to judgment number 4/59 of the EEC Court of Justice delivered on 04/04/1960.

Similar, identifier

urn:lex:es:tribun:dec:2001-09-28;68

refers to decision number 68 of the Spanish Supreme Court delivered on 09/28/2001.

At the expression level, different versions (because of changes in the text or correction of publication errors) and languages of a legal text have its own specific identifier using the following structure:

<expression>::=<version>["."<language>]?

where <version> is usually expressed by the promulgation date (original version is specified by the string 'original') and <language> is the identification code of the language (according to ISO 639-1 or ISO 639-2). Language information is not necessary when the text is expressed in the unique official language of the country or jurisdiction. The following identifier:

urn:lex:be:conseil.etat:dec:2008-07-09;185.273@original:fr

refers to original version of a decision delivered by The Council of State of Belgium in French.

At manifestation level, suitable suffixes describe: digital format (e.g. XML, HTML, PDF, etc. according to MIME Content-Type where '/" character is substituted by '-" character), editorial staff who produced it, components (whole document or some part of it e.g. table, figure, etc.), other features (e.g. anonymized decision text):

<manifestation> ::= <format>["."<specification>]*

'"<editor>["."<specification>]*

'"<component>["."<specification>]*

'"<feature>["."<specification>]*

For example, the following identifier:

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Using the following structure:

\[
<\text{URN-reference}>::= <\text{URN-document}>[^*]*<\text{partition-id}>?\]

it is possible to reference only specific partition of the document and not the entire document.

URN:LEX identifiers are comprehensive and meaningful so lawyers can easily understand all relevant parts. Encapsulation of the national identification systems is supported. Extensibility is well supported and also expression and manifestation levels are available. These benefits increase the complexity of the structure and therefore possibility for mistakes caused by typing errors.

2.3. ECLI

ECLI [8] (European Case Law Identifier) is a standard method to construct an identifier from a national neutral identifier in such a way that it can be used by any lawyer or citizen from every Member State to cite or find a case in every system where it is stored.

ECLI [9] has five constituting components, all of them mandatory, and all separated by colons [7]:

- "ECLI" as the self-descriptor
- EU country code
- a national court code
- the year the decision was rendered
- an ordinal number, with a maximum of 25 alphanumeric characters or dots

ECLI can be easily interpreted by both lawyers and computers. The last part of ECLI identifier can easily encapsulate other identifiers. By allowing only the dot as a special character, it reduces the risk of spelling mistakes. Its use within any URN-based system, where some characters have a specific meaning, is not hindered. For example, ECLI identifier for judgment, delivered in 2013, by the Higher Court in Ljubljana in case number I Cp 925/2012 is as follows:

\[
\text{ECLI:SI:VSLJ:2013:I.CP.925.2012}
\]

where 'SI' is the country code for Slovenia, 'VSLJ' is the court code for the Higher court in Ljubljana, "2013" is the judgment delivery year, a "I.CP.925.2012" is the court case number where all non-alphanumeric characters are replaced with dots.

Each Member State using the ECLI must appoint a governmental or judicial organization as the national ECLI coordinator. This ECLI coordinator
is responsible to establish the list of courts and tribunals (and their abbreviations) allowed to assign ECLIs, and the scheme of document types. National coordinator also decides how the ordinal part of the ECLI is formatted. The encapsulation of existing national identification systems within ECLI is recommended, and can therefore also be regarded as a responsibility of the national ECLI coordinator.

ECLI identifiers are meaningful and could be easily understood by both humans and computers. Using only two non-alphanumeric characters (colon and dot) the possibility of typing errors is minimized. Encapsulation of the national identification systems is supported. It should be noted that ECLI is not extendable to support additional features.

2.4. AKOMA NTOSO URI

OASIS LegalDocML technical committee [1], whose aim is advancing worldwide best practices for the use of XML in legal documents, have based their work on the AKOMA NTOSO project [13]. In XML manifestations of AKOMA NTOSO documents, URI references are expressed in relative forms which makes all URIs independent of the actual resolution mechanism and allows for flexible storage and access. The relative part of the work-level URI contains the following elements:

- country (a two letter code according to ISO 3166-1 alpha-2)
- document type
- document subtype (if appropriate)
- the emanating actor
- original creation date (in YYYY-MM-DD format or just YYYY)
- number or title or some other disambiguating feature of the work

The following is the example of the identifier for judgment of the Constitutional Court of the Seychelles:

/sc/judgment/constitutional-court/2003/2003-sccc-1

The URI of the expression specifies different versions of the same work, or the same version of the work expressed in different languages. It consists of the following:

- the URI of the work
- the character "/"
- the language code (according to ISO 639-2 alpha-3)
- the "@" character
- zero or more comma-separated version identifiers
while the following elements are optional:

- the "#" character
- content authoring information
- content-specification date

URI of the manifestation specifies the same expression in different data formats. The URI on the manifestation-level start as follows:

- the URI of the expression

it continues with an optional part:

- the character '#'
- the markup authoring information
- any relevant markup-specific date
- any additional markup-related annotation

and at the end is the required part:

- the character '.'
- a three letter acronym of the data format

It is evident that AKOMA NTOSO URIs are fully extendable and support many additional features. AKOMA NTOSO URIs are also very meaningful and could be easily understood by humans and by computers. Encapsulation of the national identification systems is supported as well.

2.5. Supreme Court of Western Australia

As stated in [12] and presented in Figure [1], the judgment document is divided into four sections: JudgmentHeadings (contains data about court, judges, parties, case number, hearing date, delivery date, related legislative documents, etc.), JudgmentBody (contains content of a judgment composed of many paragraphs), FootNotes (additional references and notations), Parties (defines various parties so they can be easily referenced). FootNotes is an optional element.
Figure 1: Judgment element [12]

Some of the elements contained in structure JudgmentHeadings are: Jurisdiction (the court name), CourtTitle (provides information of the type of court within jurisdiction), CourtLocation (the physical location of where the matter was heard), Appeals (the origin of the appeal), Citation (how the case will be referenced in citations), Coram (names of judicial officers hearing the case), DatesHeard (dates the case was heard), Delivered (the date the judgment was delivered orally), Published (the date the judgment was published), Matter (the subject of the litigation or the matter on which the action is taken), FileNumber (identifies the case by case type, case number and year), Between (opposed Parties), CatchWords (the summary classification of the matters), HeadNotes (the extract of the judgment), Legislation (the list of the legislation used in the body of the judgment), Category (the categorisation of the judgment), CounselRepresentations (identifies counsel with one or more clients among Parties), SolicitorRepresentations (identifies solicitors among Parties), CasesReferred (the list of judgments used in the body of the judgment), CasesAlsoReferred (the list of judgments used in the hearing of the case).

The file number on the judgment is the unique number given to an action (both criminal or civil) at the originating process stage. Element FileNumber, as shown on Figure 2, is comprised of CaseType, CaseNumber and CaseYear.

Figure 2: JudgmentHeadings element [12]

CaseType identifies type of action that has been commenced (e.g. CCA for Court of Criminal Appeal, COR for Corporations, etc.). CaseNumber is a sequential number, usually computer generated. CaseYear is the year when
the action was commenced at the relevant court.

Element **Orders** represents the final result or decision. As shown on Figure 3, it is comprised of one or more **Order** elements which is comprised of: **ParagraphNumber** (allocated by the originator) and **ParagraphText** (free format text information).

![Figure 3: Orders element](image)

Following example illustrates structure **Orders** in decision when an appeal is dismissed:

```xml
<Orders>
  <Order>
    <ParagraphNumber>01</ParagraphNumber>
    <ParagraphText>Appeal dismissed</ParagraphText>
  </Order>
</Orders>
```

Element **CatchWords**, as shown on Figure 4, is comprised of one or more **CatchWord** elements which is comprised of **ParagraphNumber** (allocated by the originator) and **ParagraphText** (free format text).

![Figure 4: CatchWords element](image)

Judgments can be a concessus of the Coram or a set of decisions made by one or more Coram members. Judgment content is divided into numbered paragraphs. Element **CoramDecisions**, as shown on Figure 5, is comprised of one or more **CoramDecision** elements which is comprised of **ParagraphNumber** and **ParagraphText**.
Figure 5: CoramDecisions element

Element NonCoramDecisions, as shown on Figure 6, is comprised of one or more NonCoramDecision elements.

Figure 6: NonCoramDecisions element

Each NonCoramDecision element, as shown on Figure 7, is comprised of party references and corresponding decisions.

Figure 7: PartyReferences element

The text of the decision is divided into numbered paragraphs represented by elements of type ParagraphTYPE, as shown on Figure 8.

Figure 8: Decisions element

Party, as shown on Figure 9, refers to any person or entity that has some role in a particular action. Address, Position, NamedPosition and Representations are optional elements and are not required.
The XML schema of the judgments of The Supreme Court of Western Australia is quite distinctive. JudgmentHeadings contains metadata and also the heading part of the textual document. JudgmentBody is very specific - it contains one of two types of decisions: CoramDecisions or NonCoramDecisions. Decision text is then divided into paragraphs with no additional markup of significant parts of the text.

2.6. AKOMA NTOSO

As described in [L3], AKOMA NTOSO supports following types of markup:

1. structural - to markup the structure of the document (judgments are divided in four sections: introduction, background, motivation i decision)

2. semantical - to markup the semantic of some parts of the text such as judges, parties, case numbers, references to other legal documents, etc.

3. typographical - to markup the formatting of the text that may have not been already marked up by structural or semantic elements

4. metadata - for judgments it provide additional data such as: date of delivery, date of publication, matter of the case, trial procedures, etc.)

Judgments are one of six different families of document types supported by AKOMA NTOSO. Judgments are described by three mandatory elements: meta, header and judgmentBody. Optional elements are: coverPage (the cover page text), conclusions (usually contains signatures) and attachments (list of references to annexes, tables, exhibits connected to the main document).

Metadata are editorial additions, not found in the original document, that improves comprehension and classification of the document. The metadata elements of AKOMA NTOSO are organized in <meta> block. Main metadata sections are:
identification - facts about document (e.g. dates and authors) according to the Functional Requirements for Bibliographic Records (FRBR) model

publication - publication metadata (e.g. name of the source, date of publication)

classification - keyword classification

lifecycle - list of the events that are involved within the chain of document modifications

workflow - list of the events that are involved with the judiciary process

analysis - final outcome and qualification of citations made by the judge for supporting his/her thesis and final decision

references - list of external resources connected with the document as well as of all individuals, organizations and concepts

notes - annotation inserted by the editor or by the author

header contains some important information useful for information retrieval and for the qualification of the document: courtType, neutralCitation, party, judge, lawyer, docketNumber. judgementBody is divided in four main sections: introduction, background, motivation and decision:

introduction is the recap of the judiciary history of the law case. If the case is an appeal in this section it is summarized the main previous judiciary steps

background is the description of the facts

motivation is the judge argumentation on the base of the law, of the previous judgments, on the base of the stare decisis

decision is the final results of the judge(s)

When it is needed to anonymize some personal data, there are two methodologies available:

- put the "class=anonimizer" to skip the presentation of these data, while rendering the judgment

- using omissis for obscuring the data

<person id="prs1" refersTo="#adam" status="ignore" class="anonimizer">John Adam </person> is a minor people part of the fact of this judgment.

<omissis status="omissis" refersTo="#minorPerson" class="anonimizer">....</omissis>
Although AKOMA NTOSO is mainly oriented to parliamentary and legislative documents, it is fully acceptable solution for representation of judiciary documents. Its structure is general enough and not very rigid, which makes AKOMA NTOSO applicable for judgments from different countries. All available types of markup makes judgments self explanatory. Among supported features, judgment anonymization is very useful.

3. Implementation in Serbian judiciary

Court cases, according to the Rules of Procedure of the Court [16] article 165, has dedicated unique court case number. According to article 166 of the same rules, that number consists of case-type code, sequential number of that case and the last two digits of the year the case was filed. In the article 258, it is stated that when proceedings in a case designated as finally solved in the register continue due to the overruling of the ruling (in full or in part), after the adjournment of the proceedings, after a defendant is found pursuant to an arrest warrant, etc., the case shall be registered as a new case with all required entries.

Since every judgment is unique for its court case, judgments could be unambiguously identified by the case number.

Case type code, which is integral part of the case number, can contain non-English characters. According to URN:LEX recommendation [10] national characters should be turned into base characters.

Since ISO 3166 country code for Republic of Serbia is 'RS', URN:LEX identifier for judgment of Appellate court in Novi Sad, in case number Gž 287/10, should be:

urn:lex:rs:sud.apelacioni.novi-sad:presuda:2011-02-18;gz.287.2010

Considering ECLI, possible court codes, established by the national ECLI coordinator, should be: 'ASNS' for Appellate court in Novi Sad, 'VSNS' for Higher court in Novi Sad, and 'OSNS' for Basic court in Novi Sad. ECLI for judgment of Appellate court in Novi Sad, in case number Gž 287/10, should be:


Identifier in AKOMA NTOSO format could be as follows:

/rs/judgment/ap-ns/2011/gz-287-2010

The structure of judgments is defined by law: Rules of Procedure of the Court (16), Civil Procedure Code (14) and Criminal Procedure Code (15).

According to Rules of Procedure of the Court [16] article 125, every judicial document has in its upper left corner the coat of arms of the Republic of Serbia, name "Republika Srbija", the court name, case number, date and the seat of the court.

Judgments, according to Civil Procedure Code [14] article 355, consist of introduction, statement and explanation. Introduction of the judgment contains:
indication that the judgment is made in the name of the people, the name of the
court, name and surname of the presiding judge and council members, name
and surname, permanent or temporary residence of the parties, headquarters
of the parties, their representatives and attorneys, the value of dispute, brief
description of the subject of dispute, the day when the trial was closed, as well
as the day when the judgment was rendered. The statement of the judgment
contains the decision of the court about accepting or rejecting individual claims
concerning main issue and auxiliary demands and decision about the existence
or non-existence of the claim declared for the purpose of compensation. In the
explanation the court states: claims of the parties and their allegations about
the facts on which such claims are based, evidences and regulations on which
the court has founded its judgment, if not otherwise provided by the law.

Similar, according to Criminal Procedure Code [15] article 428, judgments
consist of introduction, statement and explanation. The introduction of the
judgment contains: the specification that the judgment is being made in the
name of the people, title of the court, names and surnames of the president
and members of the panel and of the record-keeper, name and surname of the
defendant, criminal offence with which he was charged and whether he was
present at the trial, date of the trial and whether the trial was public, names
and surnames of the prosecutor, the defence counsel, defendant’s legal repre-
sentative and proxy who were present at the trial, and date of proclamation of
the judgment as well as if the judgment was adopted unanimously or by the
majority of votes. The statement of the judgment contains the personal data of
the defendant and the decision rejecting the charges, acquitting the defendant
or pronouncing the defendant guilty. In the explanation of the judgment the
court will present reasons for each item of the judgment.

Among other metadata in the header of an AKOMA NTOSO document,
very important element is the analysis element which contains the final decision
as well as the references to the prior judgments and qualification of its relation-
ship (e.g., supported, overruled, extended, restricted, etc.) This is illustrated
by the following example, where in the judgment [1] of the Appellate court in
Novi Sad, in the case number Gž 4206/11, the appeal was rejected and thereby
supported the first instance judgment of the Basic court in Pančevo in the case
with number P 4339/10:

<analysis source="#somebody">
  <judicial>
    <result type="deny"/>
    <supports id="jdc01">
      <source href="#casesReferences"/>
      <destination
        href="/rs/judgement/os-pa/2011-08-22/p-4339-10"/>
    </supports>
  </judicial>
</analysis>

In the result element, the final decision is expressed by attribute type
which in this case has value deny. In addition, under element supports it is
indicated which first instance judgment is supported by denying appeal using corresponding URI. The introduction fragment in AKOMA NTOSO format should look as follows:

```xml
<introduction>
  <p style="text-align: center;">U IME NARODA</p>
  <p>Apelacioni sud u Novom Sadu u veću sudija <judge id="jud01" refersTo="#jovanovic">Petra Jovanović</judge>, predsednika veća, <judge id="jud02" refersTo="#bajic">Branke Bajić</judge> i <judge id="jud03" refersTo="#dragas">Spomenka Dragaš</judge>, članova veća, u pravnoj stvari tužioca <party id="p1" refersTo="#bs" as="#Appellant">B. S.</party> iz B., R. BiH protiv tuženog <party id="p2" refersTo="#jkpg" as="#Respondent">JKP "G." P.</party>, radi činidbe, odlučujući o žalbi tužioca izjavljenoj protiv presude <organization refersTo="#ospa" id="org1">Osnovnog suda u Pančevu</organization>, poslovni broj <ref id="ref01" href="/rs/judgement/os-pa/2011-08-22/p-4339-10">P 4339/10</ref> od <date date="2011-08-22">22.08.2011. godine</date>, u nejavnoj sednici veća održanoj <date date="2012-11-28">28.11.2012. godine</date>, doneo je sledeću</p>
  <p style="text-align: center;">PRESUDU</p>
</introduction>
```

Text of the introduction is split into paragraphs with marked up names of judges and parties. The first instance court, its judgment and specified dates are also marked up.

The statement of the judgment, containing the decision of the court, is as follows:

```xml
<decision>
  <p>Žalba se ODBIJA, pa se presuda <organization refersTo="#ospa" id="org2">Osnovnog suda u Pančevu</organization>, poslovni broj <ref id="ref02" href="/rs/judgement/os-pa/2011-08-22/p-4339-10">P 4339/10</ref> od <date date="2011-08-22">22.08.2011. godine</date>, u nejavnoj sednici veća održanoj <date date="2012-11-28">28.11.2012. godine</date>, doneo je POTVRĐUJE.
</p>
</decision>
```
Element decision, containing the statement of the judgment, is also presented in form of paragraph.

The explanation of the judgment, with the inline elements, where some of the content has been omitted to simplify the example, should look as follows:

```
<motivation>
  <p>
    <omissis>
      ... Some of the content was deleted in order to simplify the reading of the example ...
    </omissis>
  </p>
  <p>
    Prvostepeni sud je, suprotno žalbenim navodima tužioca, pravilno postupio kada je odbio zahtev tužioca da obaveže tuženog da tužiocu nadoknadi štetu, na ime pada cene predmetne nekretnine, budući da tužilac, shodno odredbi <ref id="ref14" href="/rs/act/2003-02-04/1/srp@/main.xml#cl189">člana 189 ZOO</ref>, nije pružio relevantne dokaze da je radnjom ili propuštanjem tuženog sprečena prodaja navedenog stana po povoljnijoj tržišnoj ceni.
  </p>
  <p>
    Obzirom na sve navedeno, kao i na činjenicu da se ni preostalim žalbenim navodima ne dovodi u sumnju pravilnost prvostepene presude, ovaj sud je, shodno odredbi <ref id="ref15" href="/rs/act/2009-12-29/111/srp@/main.xml#cl375">člana 375 ZPP-a</ref>, odlučio kao u izreći.
  </p>
</motivation>
```

Explanation of the motivation of the judges is split into paragraphs inside motivation element. The use of the omissis element is also shown here.

4. Conclusions

The aim of this paper is to review the available mechanisms for identifying court decisions, predefined metadata sets for describing their content and format for representing their entire content in order to apply it in the Serbian judiciary.

From this review, it was concluded that AKOMA NTOSO meets the specified requirements, while it also provides enough flexibility that allows its use in different jurisdictions (European Parliament, Parliament of Uruguay, Italian Senate, Senate of Brazil, South Africa Parliament). The features of AKOMA NTOSO are in accordance with the structure and content of the judgment as prescribed by the law. The scheme allows the implementation of both restric-
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tions and extensions, which allows the scheme to fully adapt to the character-
istics of local jurisdiction. Apart for legislation, it is applicable and provides
good support in judiciary.

Further research should be directed towards finding an adequate editor of
judicial decisions which would, among other things, allow generation of a draft
judgment, markup parts of the judgment and their referencing to the appro-
riate legislative documents, and also referencing of judgment on appeal to
its prior decisions. Also, the development of a parser that can automatically
parse judgments from plain text, PDF or Word/Writer format into AKOMA
NTOSO format would greatly simplify transformation of legacy documents into
the machine-readable format.

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