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**FORMAL SPECIFICATION OF LEGAL DOCUMENTS
ISSUED BY BULGARIAN GOVERNMENT**

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A specification of legal documents structure is given as is defined by the current regulations. Deviations from this structure are commented and needed future researches are enlisted. This specification is a step to the document exchange functionality for the e-government.

Introduction. The most important documents are official legal documents issued by the Parliament, Council of Ministers and its substructures. For these documents there is a regulation about their structure and contents defined in [1] and [2]. The formal specification of this kind of documents is given in the Appendix to this paper.

The backbone of e-government is the document exchange between government institutions and between government and citizens (companies, non-government organizations and so on). This exchange undoubtedly can be implemented in XML format, which is widely accepted as a standard for information exchange between different systems. The specification given in this paper can be used as a working draft for DTD specification of official legal documents.

Documents structure. It is defined in [2] Articles 24-47. Some legal documents have no such a structure: for example, such ones are the documents issued before [1] and [2] have been published, other documents not conforming to this structure are the documents issued of government substructures like local authorities, governmental institutions and so on. A large investigation is needed on generally non conforming documents.

Every document has a title, which contains information about the document type and its topic. Some titles of some document types (decree, enactment, regulation, instructions) must contain numbers. There is no formal structure and there are several variants which must be investigated.

Only very important documents have an introduction. Which ones are with introductions must be investigated.

Articles are the basic building structure of the documents. As an exception, articles can be accompanied by notes and examples. Last ones are not investigated and are not given in the specification.

Articles of code must have a title and articles of laws can have. However in some codes there are articles without titles. In the specification all code articles must have titles – for the sake of reality specification must be changed, but before doing that a careful investigation must be done.

There is a structural grouping of articles. These substructures sometimes contain introductions. In the specification such an option is not included, because such a thing is not defined in [1] and [2].

Articles can be arranged by their semantic type. This option is not included in the specification.

List, tables, schemas and so on are organized as appendixes, but sometimes they can be inserted in substructures. The last possibility is not specified. The structure of appendixes is very disperse and needs further investigation.

Additions have their sophisticated structure and an investigation on it is needed.

Transitions and conclusions have article structure, but it has strong semantic testament. An investigation is needed too.

Update. There are two ways for document update. The first one is with a special document. The second one is through additions and transitions of new legal document. In reality both ways can be regarded as update transactions on the legal database. From this point of view a trace of this update must remain, because in some cases the acting law before some updates is very important.

There are principles described in [2] how documents are updated, but there are many deviations from these rules. An investigation on that topic must be done.

Semantic. Most of investigations needed are semantic ones. In [1] and [2] are given business rules for legal document preparations. A specification on the topic (for example in UML) is needed too.

Very important is the knowledge extraction from the text. Before going in that direction all syntax problems must be solved.

Conclusion. Research on legal database to some extent can be done without cooperation with official authorities, but for the needs of the e-government very close cooperation is needed.

This specification must be carefully investigated; more research must be done to have more precise syntax. After that XML specification can be deployed.

My personal interest on the topic is based on my experience as a database developer for Apis Ltd.

Appendix. The specification is given in BNF with standard notation of ISO.

legal-document = constitution | code | law | decree | enactment | regulation

| order | instruction | legal-document-for-update-and-addition.

constitution = constitution-title [introduction] constitution-body.

constitution-title = TEXT.

code = code-title [introduction] code-body.

code-title = TEXT.

law = law-title [introduction] law-body.

law-title = TEXT.

decree = decree-title [introduction] decree-body.

decree-title = TEXT.

enactment = enactment-title [introduction] enactment-body.

enactment-title = TEXT.

regulation = regulation-title [introduction] regulation-body.

regulation-title = TEXT.

order = order-title [introduction] order-body.
 order-title = TEXT.
 instruction = instruction-title [introduction] instruction-body.
 instruction-title = TEXT.
 legal-document-for-update-and-addition =
 legal-document-for-update-and-addition-title [introduction]
 legal-document-for-update-and-addition-body.
 legal-document-for-update-and-addition-title = TEXT.
 constitution-body = body.
 decree-body = body.
 enactment-body = body.
 regulation-body = body.
 order-body = body.
 instruction-body = body.
 body = (body-with-grouping | body-without-grouping) {appendix} [addition]
 [transitions-and-conclusions].
 body-without-grouping = {article}+.
 article = “Чл.” next-global-article-number “.” ({align}+ | article-text).
 next-global-article-number = NATURAL-ARAB-NUMBER.
 article-text = TEXT.
 align = (“(“ next-relative-align-number “)” ({dot}+ | align-text).
 next-relative-align-number = NATURAL-ARAB-NUMBER.
 align-text = TEXT.
 dot = next-relative-dot-number “.” ({letter}+ | dot-text).
 next-relative-dot-number = NATURAL-ARAB-NUMBER.
 dot-text = TEXT.
 letter = next-relative-letter “)” letter-text.
 next-relative-letter = LOWER-CASE-CYRILLIC-LETTER.
 letter-text = TEXT.
 body-with-grouping = ({part}+ | {chapter}+).
 part = “Часть” next-global-part-number part-title
 ({part}+ | {chapter}+ | {article}+).
 next-global-part-number = TEXT.
 part-title = TEXT.
 subpart = “Дял” next-relative-subpart-number subpart-title
 ({chapter}+ | {article}+).
 next-relative-subpart-number = TEXT.
 subpart-title = TEXT.
 chapter = “Глава” next-global-chapter-number chapter-title
 ({subchapter}+ | {article}+).
 next-global-chapter-number = NATURAL-ROMAN-NUMBER.
 chapter-title = TEXT.
 subpart = “Раздел” next-relative-subpart-number subpart-title {article}+.
 next-relative-subpart-number = TEXT.
 subpart-title = TEXT.
 appendix = “Приложение” appendix-title appendix-text.

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appendix-title = TEXT.
appendix-text = TEXT.
addition = “Допълнителни разпоредби” {paragraph}+.
paragraph = “§” next-global-paragraph-number “.” paragraph-text.
next-global-paragraph-number = NATURAL-ARAB-NUMBER.
paragraph-text = TEXT.
transitions-and-conclusions = transitions | conclusions
    |transitions-and-conclusions.
transitions = “Преходни разпоредби” {paragraph}+.
conclusions = “Заклучителни разпоредби” {paragraph}+.
transitions-and-conclusions = “Преходни и заключителни разпоредби”
    {paragraph}+.
code-body = (code-body-with-grouping | code-body-without-grouping)
    {appendix} [addition] [transitions-and-conclusions].
code-body-without-grouping = {article-title article}+.
article-title = TEXT.
code-body-with-grouping = ({code-part}+ | {code-chapter}+).
code-part = “Част” next-global-part-number part-title
    ({code-part}+ | {code-chapter}+ | {article-title article}+).
code-subpart = “Дял” next-relative-subpart-number subpart-title
    ({code-chapter}+ | {article-title article}+).
code-chapter = “Глава” next-global-chapter-number chapter-title
    ({code-subchapter}+ | {article-title article}+).
code-subpart = “Раздел” next-relative-subpart-number subpart-title
    {article-title article}+.
law-body = (law-body-with-grouping | law-body-without-grouping)
    {appendix} [addition] [transitions-and-conclusions].
law-body-without-grouping = {[article-title] article}+.
law-body-with-grouping = ({law-part}+ | {law-chapter}+).
law-part = “Част” next-global-part-number part-title
    ({law-part}+ | {law-chapter}+ | {[article-title] article}+).
law-subpart = “Дял” next-relative-subpart-number subpart-title
    ({law-chapter}+ | {[article-title] article}+).
law-chapter = “Глава” next-global-chapter-number chapter-title
    ({law-subchapter}+ | {[article-title] article}+).
law-subpart = “Раздел” next-relative-subpart-number subpart-title
    {[article-title] article}+.
    Some alternative definitions based on the current state:
constitution-title = “Конституция на Република България”.
code-title =
    “Граждански процесуален кодекс”
    | “Данъчен процесуален кодекс”
    | “Кодекс за задължително обществено осигуряване”
    | “Кодекс на професионалната етика”
    | “Кодекс ва труда”
    | “Наказателен кодекс”

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| “Наказателно-процесуален кодекс”
| “Семеен кодекс”.
next-global-part-number = “първа” | “втора” | “трета” ...
next-relative-subpart-number = “първи” | “втори” | “трети” ...
next-relative-subpart-number = “първи” | “втори” | “трети” ...

Some English terms in correspondence to Bulgarian ones, used in the specification:

constitution – конституция

code – кодекс

law – закон

decree – указ

enactment – постановление

regulation – правилник

order – наредба

instruction – инструкция

REFERENCES

- [1] Закон за нормативните актове, Обн. *ДВ*, бр. 27 от 03.04.1973, изм. бр. 65 от 21.07.1995 г.
[2] Указ No 883 за прилагане на Закона за нормативните актове, Обн. *ДВ* бр. 39 от 21.05.1974 г.

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ФОРМАЛНА СПЕЦИФИКАЦИЯ НА НОРМАТИВНИ АКТОВЕ, ИЗДАВАНИ ОТ БЪЛГАРСКОТО ПРАВИТЕЛСТВО

Владимир Т. Димитров

Представена е формална спецификация на структурата на нормативните документи съгласно действащото законодателство. Коментирани са отклоненията от тази структура и са изброени необходимите по-нататъшни изследвания. Представената спецификация е стъпка към осигуряване на документооборота на електронното правителство.