

ICT & Wetgeving – Summary

This document reports on research commissioned by the WODC. Goal of this research was to provide a (partial) answer to the question *In what ways can transparency and production of (change) laws be improved with the aid of ICT?*

Within this project, a software environment would be developed for the drafting of regulations. This environment would have the following functionalities:

- An editor in which complete texts may be imported and edited.
- Automated generation of change law based on two versions of a text.
- Semi-automatic control on clashes between change laws that are being developed.
- Automated consolidation of change laws, at any point of the procedure.
- Workflow management.
- A web viewer that allows for the viewing of texts without the functionalities for editing texts.

Workflow management is not a new addition to the legislative drafting process; the various ministries already use workflow management systems. Therefore, it has been decided not to develop new software for workflow management, but to connect to existing systems in a later phase of the implementation.

During the project, there has been intensive collaboration with a working group consisting of several legal drafters from different departments. They have given feedback on the early prototypes and the initial research results. In this way, the research connects to the wishes and recommendations from actual users. From the feedback two additional desired functionalities for the editor emerged:

- Showing of references to the text being edited.
- Automatic renumbering of parts of a proposal.

A prototype has been developed which includes the original requirements (excluding the workflow management) and the two additional requirements. This prototype is based on storage of all documents in an XML format (^{MET}Alex/CEN). In this format, not only the text is stored, but extra information (metadata) as well, such as relevant dates, references and information on the structure of the document. This additional information makes it possible to implement the requested functions, which would not be possible with text-only storage.

The XML format is intended for processing by a computer only. All human users will be shown regular texts, without added computer codes. People wanting to read texts can use the viewer, which transforms the XML file to readable text (using an XSLT transformation). Legal drafters will use the editor. This editor is What-You-See-Is-What-You-Get (WYSIWYG), meaning that it shows the final texts as well, and not the XML version. However, it is expected from the legal drafter that he adds the structure information and other metadata to the document. This requires no knowledge of XML. The editor supplies templates which will apply the correct markings. In effect, this means that the legal drafter has to click a button each time he introduces a new part (such as a chapter).

In exchange for this added work, the legal drafter will receive certain benefits. First of all, there are not only templates for structure, but for frequently used texts as well, such as the text prescribed by the *Guidelines for Legal Drafting* (Aanwijzingen voor de regelgeving). These templates make it easier to add such texts to a new proposal.

As mentioned, the added structure information also enables the addition of the required functionalities, which are meant to support the legal drafter as well. Automated renumbering reduces the amount of work which is sometimes required when renumbering articles. Displaying references to the edited document makes it easier to keep an overview of the consequences of changes that are being made. In addition, there is the possibility of automated generation of change laws. This allows the legal drafter to make his changes directly in the text, instead of describing these changes by means of instructions for change. This last step is performed by the computer. This does not only have the benefit of making the drafting of change laws easier and more transparent, but also results in the computer having an overview of the changes that have been made. Based on this overview, detecting clashes with other change laws (that have been made using the same method) is possible.

The legal drafter is not the only person who benefits from this process. Because the documents are stored as XML, it is easier to search through them and to convert them to other formats. Later publication to i.e. *wetten.nl* will require less work.

The approach for change laws has the advantage that by storing the changes separately, in a file that can be interpreted by the computer, generating consolidations-on-the-fly becomes possible. This means that it is possible to create a consolidated text which shows the (textual) outcome of changes at any desired moment. Such a consolidation can also reflect a fictional scenario: what would the law look like if this proposal is accepted? Such a consolidation-on-the-fly makes it easier for i.e. members of parliament and stakeholders to quickly see the impact of a proposed change law; they are no longer required to apply the changes themselves, but can immediately view the resulting document.

The working group was enthusiastic about the prototype environment, and saw many possibilities for the use of this environment in the legal drafting process. The user interface of the prototype did not yet conform to the wishes and expectations of future users, despite advancements made during the project.

This project has shown that functionality as it was described in the assignment is possible. Combined with the enthusiasm of the test users, it leads to the recommendation to continue this development.

As mentioned, the software developed within this project is a prototype. The current software shows that the requested functionality is possible, but is not intended to for real use. More effort is needed to make this possible.

First of all, the user interface should be further improved to make it conform to the expectations of users. This is an important part of the software; a high quality user interface is an essential requirement for successful deployment of the software. The current user interface suffices for demo purposes, but the researches deem it insufficiently user friendly for use in the turbulent environment of the legal drafters.

The detection of clashes is still in a relatively early stage. Clashes are currently detected if two changes interfere with each other with regard to structure. More complicated clashes

will not be detected by the computer for the time being, as that would require understanding of the text. However, it is possible to give more frequent warnings for potential clashes. Currently, the software does not give such warnings; further research into this topic is desirable.

The other functionalities have been developed into a further stage, but some edges could be removed before the software is deployed.

Finally: research will be needed to deploy the software within the current processes. Integration with the current processes will require some effort. The software has so far been deployed in stand-alone situations. For a situation with several cooperating users, a bigger infrastructure is needed. For the connection to existing systems (workflow management and content management) specific software needs to be developed.

In addition to this technical integration, it will also be necessary to embed the software and the use of the software in the current practices. This may require adaptation of the current processes.

The researchers are of the opinion that the current prototype forms a solid basis for continued development of a production version of software for legal drafting. The development of this prototype and the discussion on its functionalities has helped the users to form a mental image of such software and the possible impact it may have on their work.