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From DocWorkX to ePub and Braille/Adapted Printing [DA, PR]

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Background:

In a former EU funded project the institute has been involved in the development of a digitization and document management system which is now available on the market as “DocWorks” by the company CCS (<http://content-conversion.com>). This tool delivers, based on an indepth analysis of the OCR result, a semantic and metadata enriched “digital original” of a document, including all rebuilt structural, administrative and other metadata based on the co-developed METS/Alto standard (XML based) (<http://www.veridiansoftware.com/knowledge-base/metsalto/>)

Idea and task:

The rebuilding of a “digital original” of a document includes all information needed to make documents accessible for people with disabilities. DocWorks provides a workflow and supports the development of these digital originals by allowing editing the result gained. Later it allows the export of this rich format to standards as PDF, full text XML and in particular ePub. The ePub3 document standard (<http://idpf.org/epub/30>) is designed including accessibility aspects and is compatible with formats and reading tools designed for people with disabilities (e.g. DAISY, www.daisy.org).The goal of this work is to use this DocWorks/ePub/Daisy environment to define and support an efficient workflow to produce accessible schoolbooks.

The result should allow an automatic adaptation of schoolbooks for individual profiles of

- Blind people (conversion into Braille and audio formats)
- Vision impaired people (enlargement, changing contrast, colors, fonts, size, ...)
- People with reading difficulties (audio, adapted print, audio – print synchronization)

The first and core task is the conversion from ePub3 into Daisy format.The second task is the implementation of a profiling system and a document adaptation system for preparing documents for adapted and Braille print.

Prerequisites and framework

This topic is open for students in Computer Science or Business Informatics. Depending on the kind of lecture (diploma thesis or practical programming task) the amount of functionalities to be implemented, based on a comprehensive specification, will be altered.This topic is suitable for teamwork (up to 4 students).

Kontaktpersonen

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