Development of the User Interface Tools for Creation of National Language Modules

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Abstract. The paper describes the UNL Toolbox, software for development of national language modules of UNL, designed at the Institute for Informatics and Automation Problems of the National Academy of Sciences of the Republic of Armenia. The software provides tools for creating dictionaries, enconversion and deconversion rules. There are also enconversion and deconversion modules which output the converted text and the list of occurred errors and their descriptions (if any). This software also can be used as an educational tool to learn creating UNL dictionaries and conversion rules.

1 System Overview

The UNL Toolbox is an integrated environment for UNL development. It contains tools for performing the most common tasks arising during UNL development such as dictionary creation and conversion rules creation. The Toolbox makes routine tasks like compilation of dictionary and conversion rules transparent to the end user. It allows setting options for an individual tool as well as for a whole system (for example the common output directory).

The main window of the Toolbox is divided into two parts (Fig. 1). On the left side of the window the toolbar is located. Pressing the buttons on the toolbar brings up appropriate tool in the right side of the window. Currently four tools are available – Dictionary Editor, Enconversion Rules Editor, Deconversion Rules Editor and Converter.

2 Dictionary Editor

Dictionary Editor provides a user friendly interface for creating UNL dictionaries and editing the existing ones. It uses XML to store the dictionary. When needed it is possible to export the dictionary in a standard plain text UNL dictionary format.

The dictionary in the dictionary editor has a tree-like structure. Each word is represented as a node of a tree with its stems (if any) represented as child nodes (Fig. 2).

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