

Interactive Enconversion by Means of the Etap-3 System

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Abstract. A module for enconversion of NL texts into Universal networking Language (UNL) graphs is considered. This module is designed for the system of multi-lingual communication in the Internet that is being developed by research centers of about 15 countries under the aegis of UN. The enconversion of NL texts into UNL is carried out by means of a multi-functional linguistic processor ETAP-3, developed in the Computational linguistics laboratory of the Institute for Information Transmission Problems of the Russian Academy of Sciences. One of the major problems in the automatic text analysis is high degree of ambiguity of linguistic units. The resolution of this ambiguity (morphological, syntactic, lexical, translational) is partly ensured by the linguistic knowledge base of ETAP-3, but complete algorithmic solution of this problem is unfeasible. We describe an interactive system that helps resolve difficult cases of linguistic ambiguity by means of a dialogue with the human.

1 Introductory Remarks

ETAP-3 is a multipurpose NLP environment that was conceived in the 1980s and has been worked out in the Institute for Information Transmission Problems, Russian Academy of Sciences ([1], [2], [7]). The theoretical foundation of ETAP-3 is the Meaning \Leftrightarrow Text linguistic model by Igor' Mel'čuk and the Integral Theory of Language by Jurij Apresjan. ETAP-3 is a non-commercial environment primarily oriented at linguistic research rather than creating a marketable software product. The main focus of the research carried out with ETAP-3 is computational modelling of natural languages. All NLP applications in ETAP-3 are largely based on a three-value logic and use an original formal language of linguistic descriptions, FORET.

2 Briefly on ETAP-3

The major NLP modules of ETAP-3 are as follows:

- Machine Translation System
- Natural Language Interface to SQL Type Databases
- System of Synonymous Paraphrasing of Sentences
- Syntactic Error Correction Tool

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