

Some New Approaches to the Semantic Representation of the Text Content

Irina Liokumovich

Abstract. The paper deals with a new approach to the semantic representation of the content of scientific-technical texts in the field of civil engineering as viewed from the formal and quantitative perspective. It is based on the matrix and chain structures in conjunction with linear and paradigmatic verbal characteristics.

The semantic content of the scientific-technical text is realised by the object-process matrix, which shows an overall static picture of correlations between the semantic subclasses of key nouns with the semantic classes of verbal predicates. The matrix is seen as a semantic model of object-process coordinates on the level of categories and logic. Such matrices are developed for the text, group, corpus of texts under study. It enables to reveal patterns of text structure and the general semantic character of texts on civil engineering.

The dynamic aspect of the text content is represented by the linear “verbal-nominative chains” analysed on three levels: 1) level of lexics and semantics; 2) level of lexics and grammar; 3) level of object-process coordinates.

The study results have a practical application in automatic processing of the text and development of the system of the text synthesis based on matrix and linear structures. In addition, the study outcomes can be used in giving a course of lectures on textlinguistics.