

Metoda określania znaczenia predykatów sieci semantycznych procesów wydawniczych

Method of determining the weight of predicates of semantic networks in publishing processes

BOHDAN DURNYAK, IRYNA PIKH, VSEVOLOD SENKIVSKYY

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Wyznaczono osobliwości sieci semantycznych, które odtwarzają formalną reprezentację powiązań między czynnikami jakości publikacji książek. Uwzględniono obecność terminów językowych zawierających predykaty atomowe opisujące rodzaje wiązań, których przetłumaczenie na wskaźniki numeryczne zwiększy lub osłabi związek między elementami sieci. Metoda określania wagi orzeczenia przez wprowadzenie współczynników istotności interakcji między czynnikami jest rozwijana w zależności od związanych z nimi terminów językowych. Model priorytetowego wpływu czynników na proces projektowania publikacji jest syntetyzowany z uwzględnieniem opracowanej metody.

Słowa kluczowe: sieci semantyczne, procesy wydawnicze, predykaty

The singularities of semantic networks, being the formal representation of links between book publishing quality, were set down. The linguistic terms including atomic predicates were taken into account. The method of determining the weight of predicates is developed in reliance on linguistic terms. The model of priority influence of factors on publication design process is synthesized on the base of the developed method.

Keywords: semantic networks, publishing processes, predicates

Introduction

The method of factor ranging [4], which was developed some time ago, uses the semantic network of the publishing process as an output information base, taking into account the relationships between factors and being formally oriented by their number and direction of influence or dependency basically. This does not take into account the essential features of the semantic network, which, in addition to the above characteristics, contains atomic predicates, expressed by linguistic terms describing the types

of relationships. Thus, the conversion of atomic predicates into numerical parameters and their inclusion in the form of special weight factors will strengthen or weaken the relationship between the components of the network. It will result in the optimization of the models of the factors priority influence on the processes of forming the book quality.

In this regard, the relevance of the problem focused on the development of the method for determining the weight of atomic predicates of semantic networks in publishing processes presented by linguistic terms, associated with the corresponding factors, the introduction and the calculation of coefficients of strengthening or weakening of the relationships between factors is undoubtedly important.

The above-mentioned scientific and applied task is partly realized by the researches. The results are presented in publications oriented on modeling of information technologies of forming the quality of publishing and printing processes. At the same time, the methodology for solving the problem of forecasting and ensuring the quality of publishing and printing processes has been disclosed [1]. Models of the factors priority influence on processes of the formation of high-quality printed products have been synthesized. The final ranging of alternatives for the formation of scientific electronic publications has been done [2]. The mathematical tool for modeling the processes of factors ranging [5] and the information technologies for the formation of the book quality [3] have been developed.

Presentation of the Main Research. To solve the problem associated with determining the weight of predicates, set by linguistic terms through the types of relationships between factors, we will present an example of a semantic network of factors in the process of designing a book edition [3]. The tops of the ne-

Prof. dr hab. inż. **B. Durnyak**, doc. dr inż. **I. Pikh**,
prof. dr hab. inż. **V. Senkivskyy**; Ukrainian Academy of Printing, Lviv