Abstract

Objective

The aim of this work is the analysis of information resources for user training and the construction of semantic content model of educational resources for use in GRID-environment.

Background studies

Today's Internet resources contain a wealth of information related to the development of semantic models in GRID environment. To structure the information and simplify its search is necessary to analyze and assess the importance of each of the resources and organization it as a semantic model.

Developing software for semantic applications, in spite of its newness, is following the path of trial and error. There are many organizations involved in such tasks, and because of this, some products have disappeared from the software market, while others became the property of other larger organizations that develop software for the Semantic Web.

Research in the field of semantic content for educational resources with the help of software products are being actively both foreign and domestic experts. Recently, it is particularly relevant in view of increasing number of information and the need for its systematic in some single model for effective joint and simultaneous access to it anywhere in the world. These studies relate primarily to the specificity of information, its relevance and importance.

Development of Semantic Web possible to accumulate experience in building and operating data that need to systematize and synthesis for the development of this domain in the GRID environment.

The effectiveness of the software used for designing and modeling the semantic content in the Grid can be assessed only on the results of certain tasks faced by developers. In this regard, special attention should be paid market research various technologies and

opportunities for program implementation, which are used for designing, developing, semantics, and on which depends the speed and quality of the system under development.

Solved in the problem

The paper presents the theoretical and practical information about the design technology of the semantic content model in Grid environment. Based on these technologies has been a model of educational content and resources developed portlet, which allows the user to being in Grig portal, information search, and receive it as a reference online resources, classified by themes and criteria that were set on the page. This user does not need to conduct independent searches on the Internet. To search using three "check boxes", each of which are relevant lists with the ability to select the desired option. Each child node "checkbox" contains subgroups - "examples", "description" and "implementation". And given the fact that the portlet is able to enhance the semantic model, the information can always add or update an existing one. There is also support for multilingual systems. At this stage of the portlet have been selected three main languages - English, Russian and Ukrainian.

Achieved

The result of the research is the theoretical study of technologies for building and organizing the semantic content model and based on their analysis of the practical implementation of the portlet for integration into the Grid environment. In addition, there is the possibility of expanding the already constructed model with new data. There is also support for multilingual systems. At this stage of the portlet have been selected three main languages - English, Russian and Ukrainian.

Scientific novelty

Scientific novelty of the work is to study the application of semantic web technologies to build and organize content model of educational resources.

Practical value

The practical value of the work consists in the possibility of applying the results to construct the semantic content of educational resources. A well-designed application software to the Grid portal to facilitate finding relevant information.

Conclusions and recommendations

In this paper some common issues encountered in the design of semantic data structures of varying complexity. Based on the study was designed to integrate into the portlet Grid environment. For his work was to construct a semantic content model of educational resources, which contains 3 main sections. Each of them has not limited the number of subsections, which include 3 knots - the description, examples and implementation. The output information is user-friendly way - in a list of the selected sections and subsections. After the research and design it was concluded that this topic is one of the most important for the presentation of data in the Grid in the form of semantics. Designed applications will actively promote this industry and entice new people and improve the organization of educational process on the basis of available data.

Robot at 93 pages, includes 17 illustrations. In the preparation of used books from 15 different sources.

Key words: SEMANTIC WEB, GRID TECHNOLOGIES, SEMANTIC MODEL, STUDY RESOURCES.