

Vetrov Anatoly Nikolaevich
www.vetrovan.spb.ru
RF, Saint-Petersburg city

THE ELECTRONIC LIBRARY
FOR THE AUTOMATED TRAINING SYSTEM
WITH THE PROPERTIES OF ADAPTATION BASED ON THE COGNITIVE MODELS

The electronic library based on the adaptive representation of sequence of information fragments processor directly acts as the additional component of the automated training system with the properties of adaptation based on the parametrical cognitive models block (www.vetrovan.spb.ru):

- 1) is made by the principle of parallel architecture and the modular principle;
- 2) functions in the several main modes, which allow to form: the mode of registration of the user in the system, the mode of administrating (the mode of (re)formation of the database of (in)active users, the mode of (re)formation of the systematic (bibliographic) catalogue and sources and the mode of configuring of the parameters of the cognitive models), the mode of reading (the mode of working with the adaptive el. textbook and the system of search), the mode of analysis and service (the mode of analysis of the database of (in)active users and the parametrical cognitive models, the mode of analysis of the systematic (bibliographic) catalogue of the electronic library and sources);
- 3) includes the several various levels of modern architecture: the interface level – the interfaces of reader (trainee), librarian and expert (consultant); the kernel of system – the procedure of primary initialization and processing of events, the adaptive representation processor (the procedure of control), the procedure of authentication and addition of the user, the procedure of control of formation of the database of users, the module of language support at the displaying of elements, the procedure of processing of the events, initiated by the user, the procedure of selecting and analysis of data of the systematic (bibliographic) catalogue and sources, the procedure of modification of the cognitive models for the electronic library, the procedure of modification of the parameters of electronic textbook, the procedure of modification of the parameters of the sources of information, the procedure of administrating of the methods of search of the information, the procedure of checking of the correctness of data of the electronic library, the procedure of providing of the access to data of the database, the procedure of selecting and processing of the requests to the data bank, the procedure of checking of the integrity of data of the database and the procedure of archiving and backing up of data of the database;

the data bank – the database of active users of the system, the database of the systematic (bibliographic) catalogue, the database of sources of the electronic library, the database of the parametrical cognitive models block and the database with a posteriori results of analysis; the backup storage of data – the database of inactive users, the backup database of the systematic (bibliographic) catalogue, the backup database of sources of the electronic library, the backup database of data of the parametrical cognitive models block, the backup database of the methods of search and the archive with the results of previous years; the semantic model of information resource (the subject of studying) includes: the algorithm of saving and extracting of the information for the adaptive representation of sequence of information fragments processor, the library of information fragments (frames) contains the textual and graphical content of information fragments, the library of the purposes of search (frames) in the information fragments, the algorithm of formation of the information fragment of the electronic library, the algorithm of reconstruction of the meta-model of the purposes of search in the information resources, the tree of the purposes of searching of the textual and graphical content, the adaptive representation of information fragments processor (the module of control of processing of the physiological parameters for the providing of the individually-oriented generation of information fragments, the module of control of processing of the psychological parameters for the providing of the individually-oriented generation of information fragments and the module of control of processing of the linguistic parameters for the providing of the individually-oriented generation of information fragments), the parametrical cognitive models block (a set of cognitive models) and the algorithm of primary initialization of the operations of user; the information model of the subject of studying (the information resource) includes: the introduction, the main part (section, module, page and information fragment), the conclusion, the bibliographic apparatus and the additional information.

In the electronic library the significant value has the formation of the table of contents, the links between the information fragments, the library of texts, the library of graphical images, the alphabetical and subject index, the library of frames of the purposes of search, the library of properties of the information fragments, the library of descriptions of information fragments and the bibliographic apparatus.

CMT allows to realize the system analysis of the information-educational environment and to increase the efficiency of the electronic library of the automated training system with the properties of adaptation based on the parametrical cognitive models block of the educational establishment as the subject of the system of education at the creating, distributing and using of inf. resources, products and services.