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## The Advantages And Purpose Of Expert Systems

The topicality of the issue. One of the leading directions of the information technology development is the intellectualization or in other words the transition from the systems operating with data to systems processing knowledge.

The purpose of the article is to investigate the advantages of expert system and its role in the modern world.

Expert system (ES) is a direction of research in the field of artificial intelligence to create computer systems which are able to make decisions similar to the decisions of experts in a given subject area. ES has been causing an increased interest lately. One of the main reasons is the possibility of their application to the solution of problems from various fields of human activity.

ES is a fundamentally new direction of improving the efficiency of software systems implementing the control and management of the learning process. It provides an opportunity for using an intelligent support for learners with different levels of qualification. In addition, ES can be useful, for instance, for replication of original techniques in remote forms of education via the Internet.

Most famous ES developed in 60-70 years are widely used nowadays. For example, the DENDRAL system allows determining the most probable structure of chemical compounds from experimental data. System automatizes the process of getting the knowledge for DENDRAL. It generates the rules for constructing fragments of chemical structures.

Thus, the main direction of technology development in 21st century is the automation of production by means of ES. System based on knowledge has certain advantages over a human expert:

1) The knowledge base can be quite large. If you introduce it into the machine once it is stored forever.

2) System based on knowledge can be resistant to "interference". The expert can be easily influenced by external factors that are not directly associated with the task.

To summarize, many experts think that an expert system will play a leading role in all spheres of human activity in the near future. Nowadays the expert system has proven its effectiveness and superiority over people. That's why they will be able to replace the human expert soon.