

ABSTRACT

The work consists of an introduction, six chapters, conclusions, list of references and applications as text software, algorithms, list of scientific papers and act implementation. The main text consists of 106 pages, includes 34 tables and 36 figures.

In the introduction the urgency problems generated goal and objectives, scientific novelty and practical utility, the basic provisions to the defense. Present a brief description of the work.

The first section provides an overview of existing dissertation intelligent systems and their classifications described purpose and scope of the methods of implementing such systems. An overall concept of expert systems and tools for their construction.

The second section provides the use of expert systems technology instrumentation, painted gradual creation. An own expert system block diagram showing all of its components. The described algorithm the system.

The third section are set requirements for the development of the knowledge base. Presented in a tree structure and shows the tree roots fill the information design processes. Painted making mechanism of the knowledge base and are filled base interface rules and facts.

The fourth section describes a means of creating an expert system, including information, mathematical, linguistic, software, technical and methodological support. An overall types of questions are asked system.

The fifth section shows the practical testing expert system in solving problems of design processes. An interface is designed and the manufacturing process of machining parts for example.

In the six section of startup management project, the project description, project ideas technological audit, analysis of market opportunities startup project launch and market strategy development project.

Keywords: instrumentation, design processes, intelligent systems, artificial intelligence, expert system, knowledge base.