

APPLICATION OF SIMULATION AND INTELLIGENT AGENTS TO SOLVE PROJECT MANAGEMENT PROBLEM

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ABSTRACT

Effective decision making in the organizational and technical systems is one of the key problems in Science and Technology. Automation of the decision making process based on simulation is relevant, because it allows to reduce the need of high experience and qualification of the decision making persons, and decrease the likelihood of errors via predicting the consequences of decisions. The paper considers the application of multi-agent resource conversion processes model in addressing the project management problem. We have described the business processes of project implementation via using reactive-intelligent agent technology. Different resource allocation models have been determined based on the analysis of allocation of the company's resources and subcontracting resources. The described algorithm of shifting the start dates of operations has become the basis of an intelligent agent of planning. We have demonstrated the effectiveness of intelligent agent of planning and simulation on the example of the project management of «Telesystems» company.

KEYWORDS: Project Management Problem, Multi-Agent Simulation, Decision Making, Intelligent Agent