

AUTONOMOUS FORMATION OF SPATIAL ONTOLOGIES IN THE INTELLIGENT DECISION-MAKING SYSTEM OF A MOBILE AGRICULTURAL ROBOT BASED ON THE SELF-ORGANIZATION OF MULTI-AGENT NEUROCOGNITIVE ARCHITECTURES

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The paper contains the results on autonomous ontologies formation gained with the help of controlling neurocognitive architecture deployed on an autonomous mobile agricultural robot. The basic principles of the automatic construction of ontologies of intelligent agents based on multi-agent neurocognitive architectures are formed. A multi-agent algorithm for synthesizing the behavior of an intelligent agent, aimed at the autonomous formation of the missing spatial ontology elements "on demand" by completing neurocognitive architectures has been developed. An algorithm for building such ontologies with the help of growth and development of a set and connections of agents-neurons in the body of controlling multiagent neurocognitive architecture of an intelligent agent has been composed.

Keywords: artificial intelligence, robotics, neural networks, cognitive architectures, multiagent systems, ontologies.

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