

The aim of this work is design, implementation and experimental evaluation of distributed algorithms for planning actions of a team of cooperative autonomous agents. Particular algorithms require different amount of communication. In the work, the related research on Monte-Carlo tree search algorithm, its parallelization and distributability and algorithms for distributed coordination of autonomous agents. Designed algorithms are tested in the environment of the game of Ms Pac-Man. Quality of the algorithms is tested in dependence on computational time, the amount of communication and the robustness against communication failures. Particular algorithms are compared according to these characteristics.