

MCTS method was first introduced in 2006 and it immediately succeeded in the game of GO. Its biggest advantage is that it doesn't require any evaluation function, which is often hard to design in a lot of games. Instead it is based on randomized simulations. This thesis describes MCTS principles and deals with its suitability for the board game Metro. The text describes Metro characteristics which make the game suitable for the use of MCTS. A software serving as game environment is attached to this work on CD. It has artificial intelligence based on MCTS method implemented in it.