

This thesis is concerned with the usage of cellular automata in development of a logic game. It describes benefits and drawbacks of individual types of cellular automata and its potential for being used in a logic game. It contains detailed description of the game rules and the user interface including the design process. The created game supports one-dimensional cellular automata containing from two up to ten states and is able to work with common and totalistic transition functions. The goal of the game is to uncover values of all cells that were generated by the cellular automaton, according to the rules of the transition function that are known to the user. It is possible to set game and visual parameters variedly. In addition, the game provides two tools for creating new cellular automata. The first is a visual editor, which allows the user to create new automata or correct the existing ones. The second is a generator that can deduce rules and values of the default generation of cells from which the specific picture can be generated.