

Lucky Lusor Implementation

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1 Technology

2 Search

- Single Player
- Multi Player

3 Heuristic

Technology

- Communication with Gamemaster → Java

Technology

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- Parser → Java

Technology

- Communication with Gamemaster → Java
- Parser → Java
- Search, Heuristic,... → ECLIPSe Prolog

Single Player

- Iterative deepening depth-first search

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- Visited states are cached in a hashtable
- Legal moves of one iteration are stored in an additional hashtable and are reused in the next iteration

Multi Player (I)

- Minimax algorithm with iterative deepening
(Max- and Min-Player)

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- Same enhancements as in Single Player

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- Alpha-beta cutoff to reduce game-tree

Multi Player (II)

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- Opponents are considered as one player
- Legal moves of this player are the cartesian product of the legal moves of every single opponent
- Games with simultaneous moves \rightarrow serialize moves of the players and move first

Heuristic

- Combination of ...

Heuristic

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 - Mobility

Heuristic

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 - Novelty

Heuristic

- Combination of ...
 - Mobility
 - Novelty
- Evaluate goal-relation on non-terminal states if useful