Mensch ärgere dich nicht / Ludo

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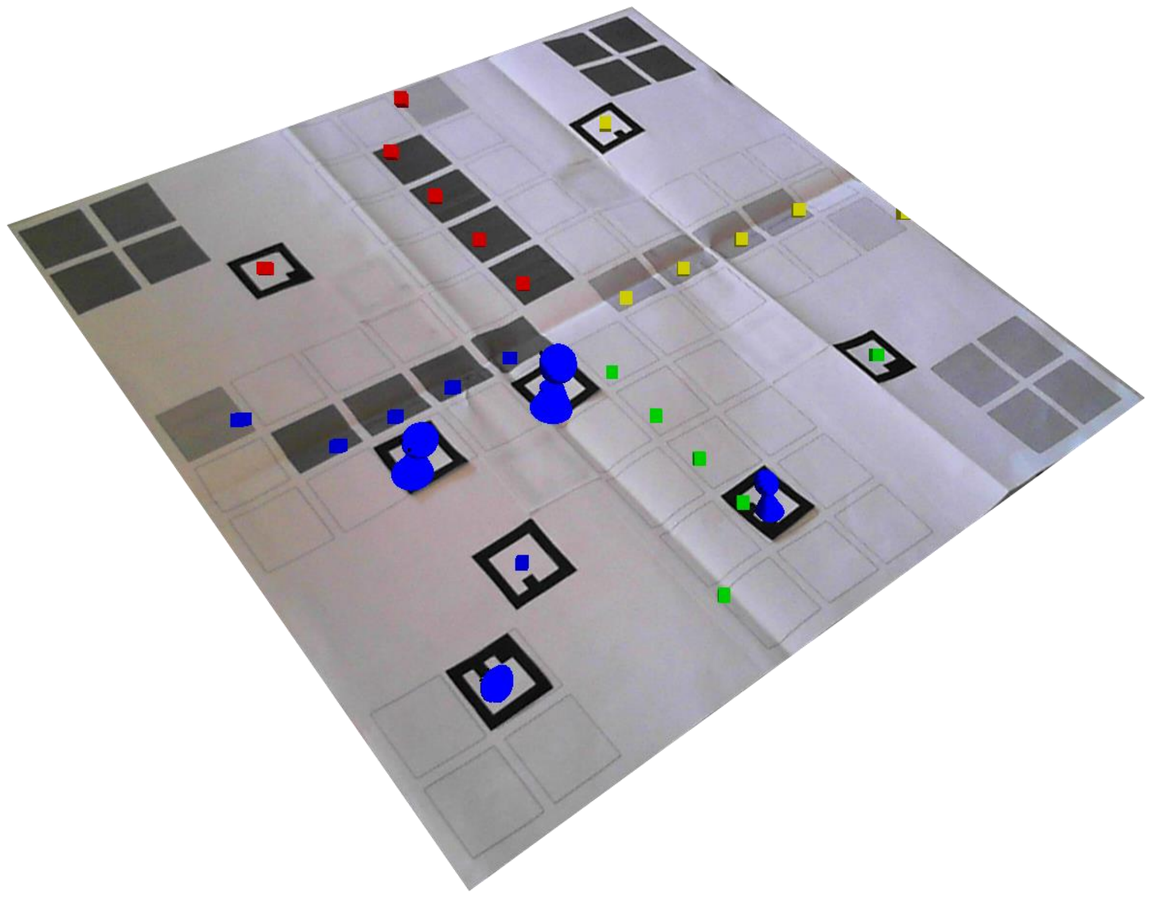
Board game enriched by Augmented Reality



Early stage of gaming field: calibration is illustrated with colored boxes

Features:

- Animation for a pawn which leaves home
- Animation if a pawn reaches the goal
- Animation if one color wins the game
- Animation if a pawn beats another pawn

→ Usability of a board game combined with nice animations for more entertainment in special situations

Playing field calibration:

The calibration of the playing field is accomplished with four markers attached to the board. Due to them, the target and start fields of each color are detected.

For accurate calibration, world-coordinates are calculated from screen coordinates. Now, vectors between the four markers are computed and used for detecting the important fields.

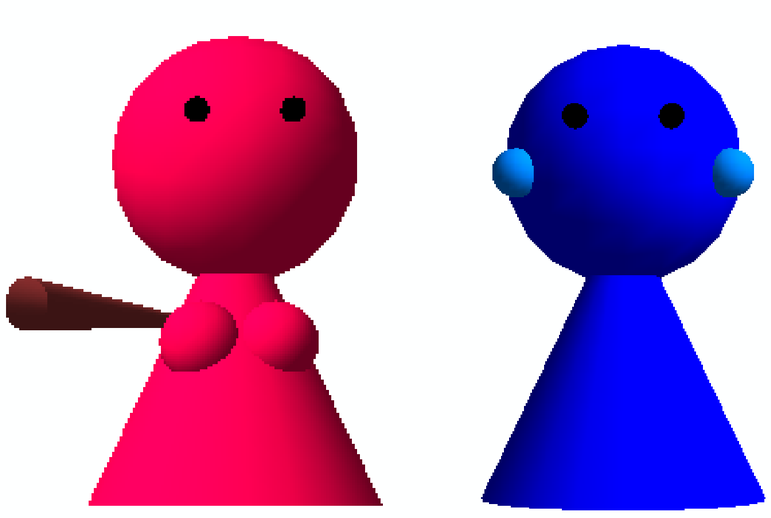
Triggering of animations:

Animations are triggered, if the distance between a pawn-marker and a house / start field / another pawn is smaller than a specified constant. Here, the accurate calibration is essential.

For the beating animation, the pawn which has not moved is chosen as the victim.

Accurate calibration of the playing field represents a big challenge

Cute pawns for good game experience



Example: red woman beats man of blue house who starts crying

Virtual pawns rendered with OpenGL:

The virtual pawns are rendered by the OpenGL state machine. They are built from simple geometric objects.

The animation is conducted with a timer function, which is called periodically.

Every pawn offers 5 types of animation:

- START: Jumping (illustrates pleasant anticipation)
- BEAT: Beats another pawn with a baseball bat
- DEFEAT: Falling down to ground and crying
- WIN: Jumping (illustrates great pleasure)
- VIC: Multiple and fast jumping (illustrates euphoria)