

Case Proposal: Don't Get Angry

Karsten Hölscher*
University of Bremen, Germany

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Abstract

1 Game Rules

Don't Get Angry is a variant of the board game Ludo, which is a simplified version of the traditional Indian game Pachisi. The main difference between Ludo and **Don't Get Angry** is the fact, that they are played on boards with a different layout. The board on which **Don't Get Angry** is played is depicted in Figure 1. The track consists of circular fields in the shape of a cross, where each arm is divided into three columns. The middle columns consist of colored fields, which are called target fields, and belong to the player with the same color. The bigger colored circles in the four corners of the board are the homes of the corresponding players. The single, colored fields on the track are the starting fields of the corresponding player.

Don't Get Angry can be played by two to four players and is based on rolling a single die. The aim of the game is to move all four pieces in a clockwise direction from the starting field to the target fields according to the score on the die. The first player having moved all four pieces to their respective target fields wins.

Each player chooses red, green, yellow or blue as their color and places their accordingly colored four pieces near the corresponding home. Every player then rolls a single die and the player with the highest throw starts the game.

Players take turns in a clockwise manner. A throw of 6 always gives another turn. If no legal move is possible, the die is passed to the next player.

Pieces are moved in a clockwise direction on the track according to the score on the die. Pieces may not be moved on home fields of a different color. On throwing a 6, a player has to move a piece from its home to the starting field. If another piece of the same color is already blocking the starting field, it has to be moved away. In general, whenever there are pieces at home, the corresponding starting field has to be cleared as soon as possible. Pieces may jump over other

*hoelscher@informatik.uni-bremen.de

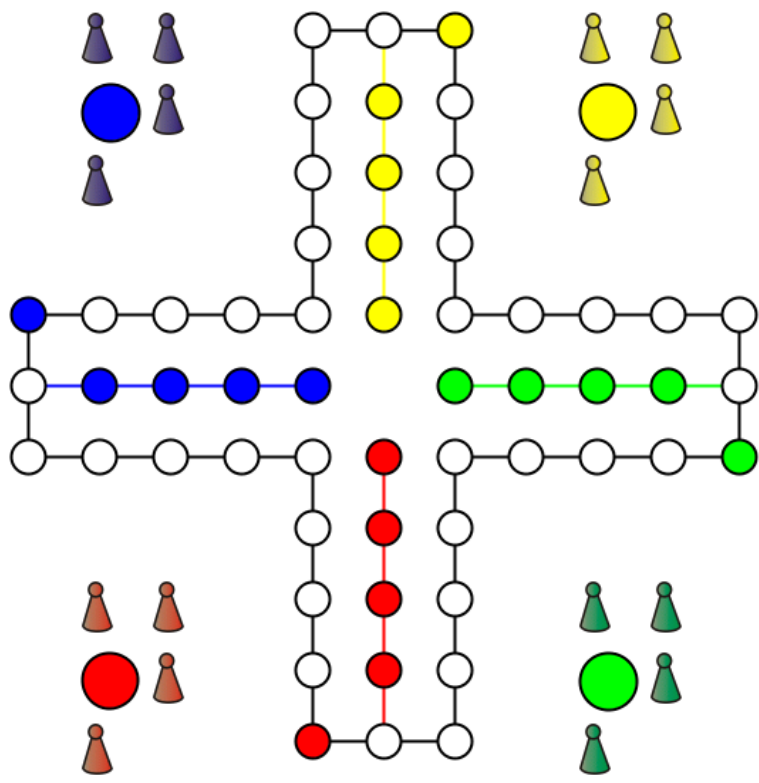


Figure 1: Board of Don't Get Angry

pieces, unless they are placed on home fields. If a piece is moved to a field occupied by a piece of a different color, the latter one is removed from the track and placed at its corresponding home. If more than one of piece on the track can legally move, the player may freely decide which one to take.

2 Case Proposal

The case proposal here is to implement the necessary graph transformation rules and a suitable graph model in a graph transformation tool. The execution of the transformation rules then simulates a game of **Don't Get Angry** according to the aforementioned rules. The challenge here is to specify different kinds of players with different strategies. One could think of a very aggressive player, which removes other players' pieces whenever possible. Another one could be a very cautious player, who would only then remove other players' pieces if left with no other choice. There could also be a player who always moves the piece that is nearest to its target fields, in order to get it there as fast as possible. Another one could always move the piece farthest from the target fields in order to move all pieces in a compact manner. It would also be nice to have the possibility of a human player, i.e. an interactive graph transformation sequence.