

3. (opt) More automatic move definitions

Dienstag, 18. Januar 2022 13:34

Semi-automatically define moves:

- Given 3d points of a puzzle (usually each points represents one sticker)
- Mark a region in 3d space (as a 2d rectangle parallel to the screen, projected into the third dimension)
 - o Select all points in that region to be part of that move
 - o Automatically calculate a rotation axis for the move as the vector connecting the COM of the puzzle with the COM of the selected points
 - o (User may change axis of rotation at this point)
- Select angle of rotation for the move (ideally using a slider)
 - o For each point in the move, apply the rotation of that angle around the given axis.
 - o After applying the rotation, for each point find the original position of a point that is closest to the new poistion. Snap to there and use the position's index to define the permutations automatically.
 - When using a slider for this, animate the points moving and draw arrows pointing towards the closest original position (where each point would snap to).
Slider controls either continous rotation angle or rotation angle in discrete steps that are automatically identified through closeness of points (add toggle to give freedom to user?)