Design Document

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1 What Are We Going to Do?

We are going to create a game about rotating/moving an object in order to fit it into a moving pane. The panes come faster as difficulty increases, and the holes get smaller (but not impossible to fit into)

1.1 Controls

1.1.1 Scheme 1

- Q, E — rotate counter/clockwise around depth
- W, A, S, D — standard movement controls
- $<$, $>$ — rotate around height

1.1.2 Scheme 2

- Arrow keys — move shape
- E, D — rotate around depth
- W, S — rotate around width
- Q, A — rotate around height

2 How Are We Going to Do It?

2.1 How are we going to generate the shapes?

Good question. The plan is to model a single shape at first in order to test the abilities of our program.

2.2 How are we going to generate the holes?

Using subtractive geometry. First, we will generate a silhouette of the 3D shape that the user controls from a random angle.

Then, subtract the silhouette in a random place in a vector rectangle, hollow out some more according to difficulty. Then extrude the rectangle to get the hole.

2.3 How is the difficulty going to increase?