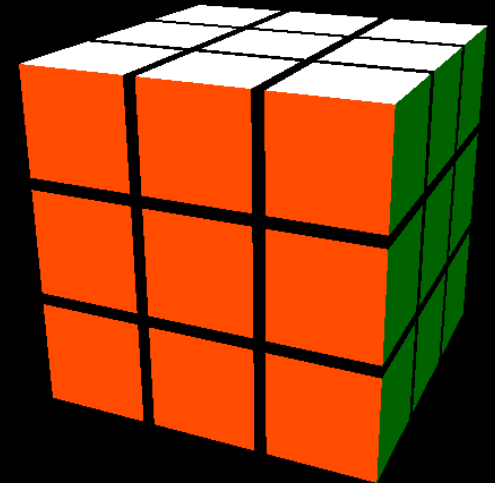## THE RUBIKS CUBE

- *Ernő Rubik invented the Cube in the spring of 1974 in his home town of Budapest, Hungary. He wanted a working model to help explain three-dimensional geometry and ended up creating the world's best selling toy.*

- *More than 300 million Rubik's Cubes have been sold worldwide. If all the cubes were placed on top of each other it would be enough to reach the North Pole from the South Pole!*

- *There are edible cubes, jewel-encrusted Cubes and even MP3 playing cubes! The biggest Cube in the world, on display in Knoxville, Tennessee, is 3 meters tall and weighs over 500kg.*

- *At the height of the Rubik's craze in the mid-1980s, it was estimated that one-fifth of the world's population had played the Cube.*

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Information from:
www.rubiks.com

RUBIX CUBE
360° OF FUN!

CP411
Computer Graphics

RUBIX CUBE

360° of FUN!

STRUCTURES

The Rubix Cube is made up of 26 smaller cubes. Each smaller cube has an MC matrix. At initialization, the face colors and position of each cube has to be set individually.

The order of the cubes within the Rubix Cube is monitored by 3x3x3 matrix: cubeStruct. When a rotation occurs, the individual cubes are rotated around the proper world coordinate system axis and the indices stored within cubeStruct are updated.

AVAILABLE FUNCTIONS

• RIGHT CLICK MENU
  • Reset cube to solved
  • Scramble cube from any state
  • Animate cube solution
  • Rotate cube view
  • Toggle sound
  • Exit application
• MOUSE FUNCTIONS
  • Click and drag front face rotation
  • Click and drag cube view rotation

FEATURES

• All rotations are animated
  o glutTimerFunc is utilized
• Cube manipulation is with the mouse:
  o click and drag
• Sound effects can be turned on or off
• Scramble option – many different possibilities
• Animated solving option from any scrambled state