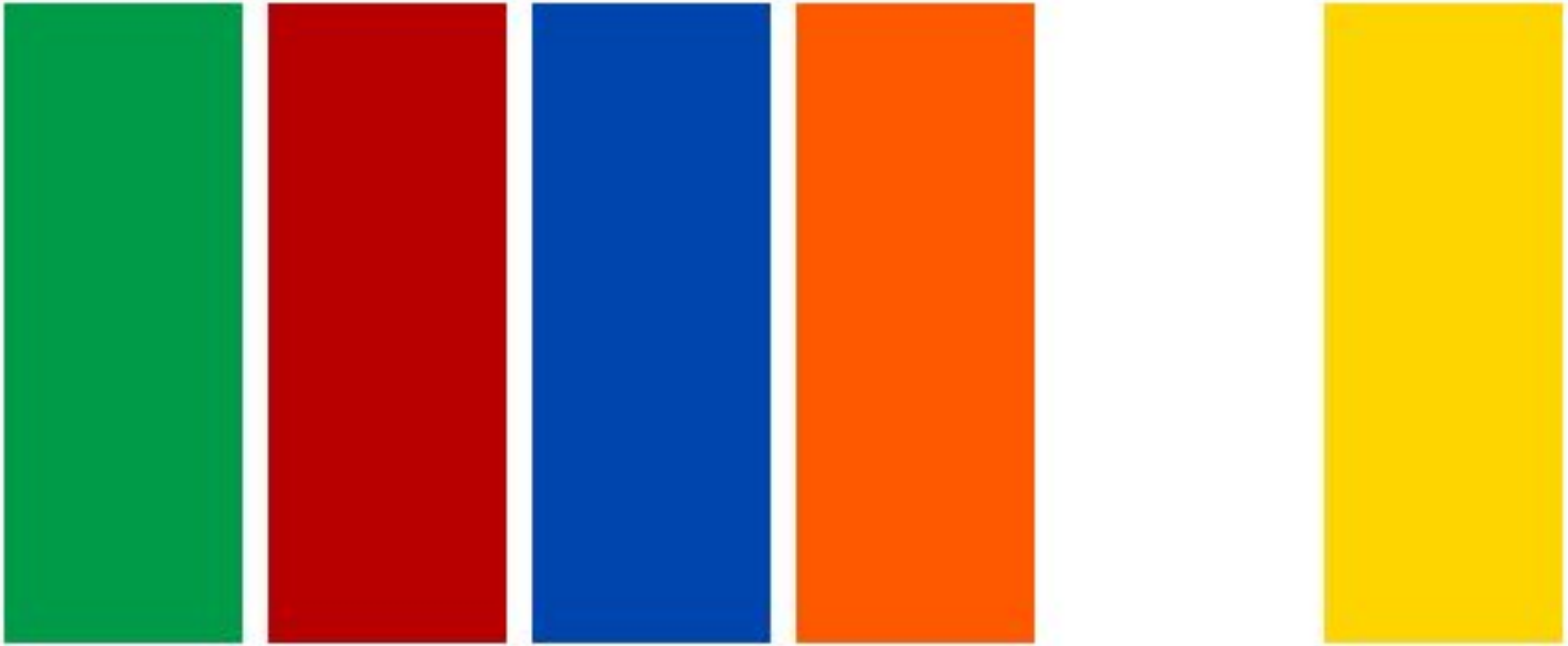
Istvan Molnar - Lightning Talk



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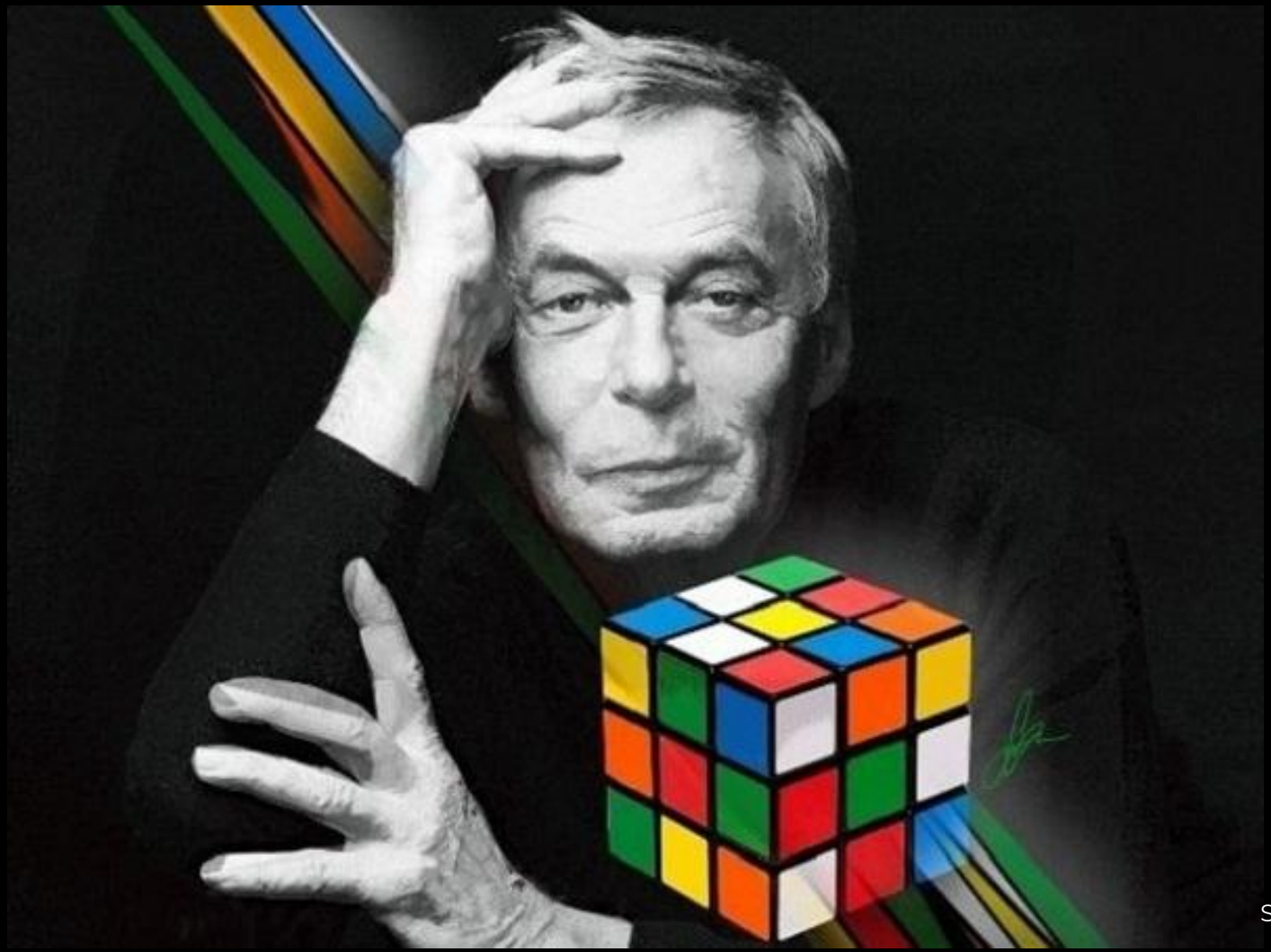
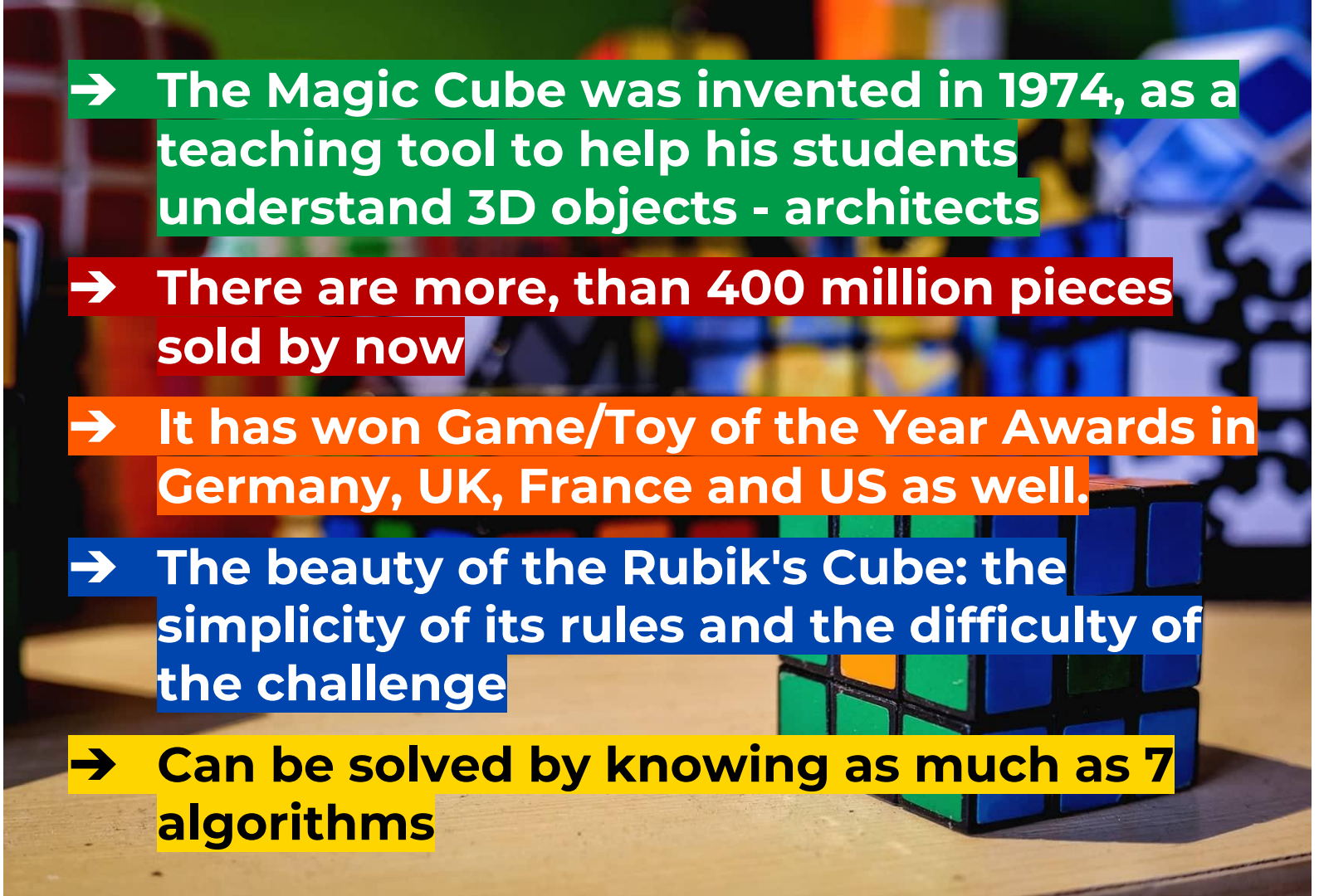
What is the
well-know n the
WO ?

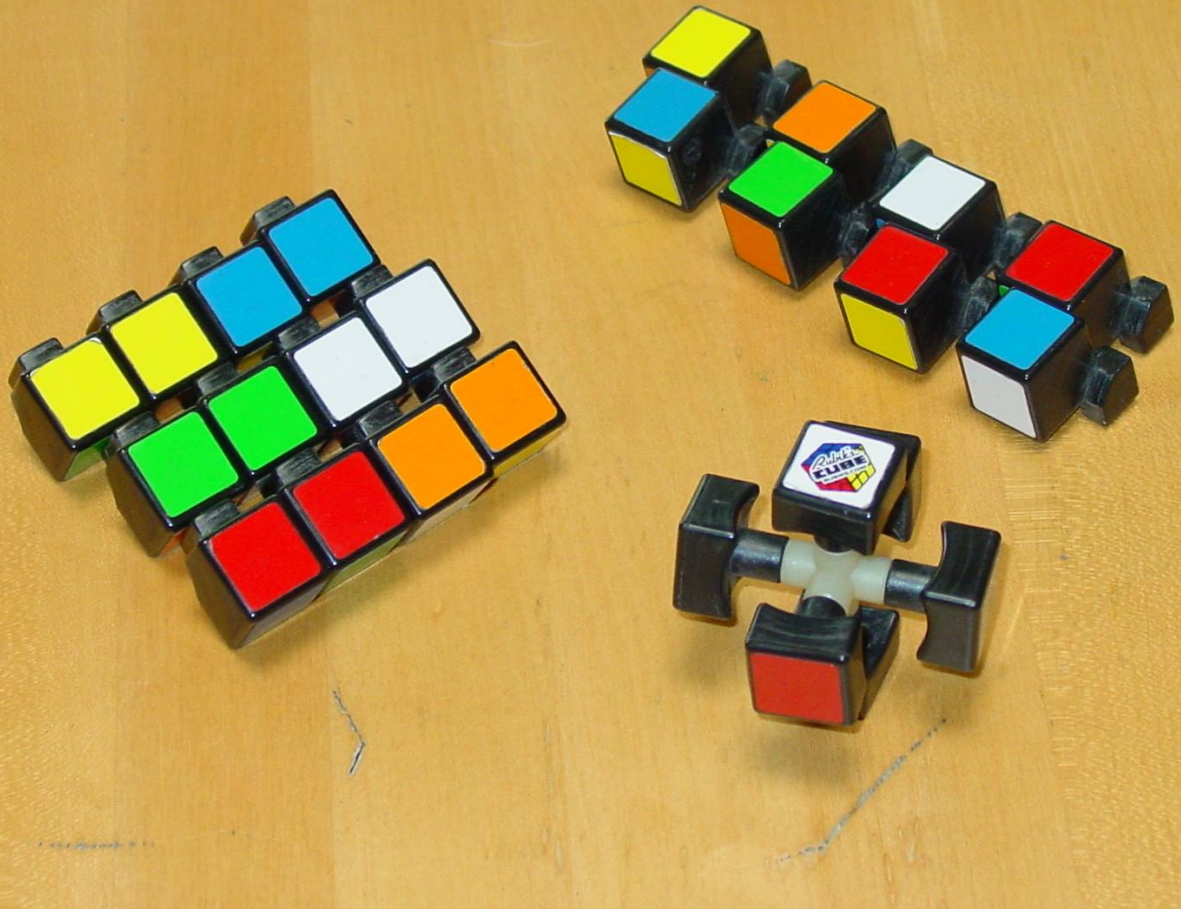
And the m st easily
recognisable?

And the
best-selling toy?



Source: ruwix.com


➔ The Magic Cube was invented in 1974, as a teaching tool to help his students understand 3D objects - architects
➔ There are more, than 400 million pieces sold by now
➔ It has won Game/Toy of the Year Awards in Germany, UK, France and US as well.
➔ The beauty of the Rubik's Cube: the simplicity of its rules and the difficulty of the challenge
➔ Can be solved by knowing as much as 7 algorithms



R

R'

R^2

r/Rw

r'/Rw'

x

y

U

U'

U^2

u/Uw

u'/Uw'

z

M

F

F'

L

L'

B

B'

D

D'

R U' L' U R' U2 L U' L' U2 L

Source: medium.com

WE HERE
LET'S GET READY TO
RUMBLE!!
memegenerator.net

```
'use strict'

function solveTheCube(size: number) {
  solveTheCross(white);
  solveTheTopCorners(white);
  solveTheMiddleLayer();
  solveTheBottom(yellow);
}
solveTheCube(3);
// 5 stages
```

```
function solveTheCross(color: string): any {
    putFirstPieceToPlace();
    putSecondPieceToPlace();
    putThirdPieceToPlace();
    putFourthPieceToPlace();
}
```

```
function solveTheTopCorners(color: string) {
  putThePieceToTheRightPlace();
  if ("white is on the left") {
    perform("D  L  D'  L'");
  } else if ("white is on the right") {
    perform("D'  L'  D  L");
  } else /* white is facing to the bottom*/ {
    turnTheCubeUpsideDown();
    perform("sexy move".repeat(3));
  }
```

```
function solveTheMiddleLayer() {
   putThePieceToTheRightPlace();
   if ("if the block goes to the right") {
      perform("D'  R'  D  R'  D  F  D'  F'");
   } else { // if the block goes to the left
      perform("D  L  D'  L'  D'  F'  D  F");
   }
}
```

```
function solveTheBottom() {
        turnTheCubeUpsideDown();

        function flipTheEdgePieces() {
            perform("U  R'  U'  R  U  R  U'  R'");
        }
        function flipCornerPieces() {
            perform("R' B' R B") && turnTop();
        }
        function rotateEdgePieces() {
            perform("R  U'  L'  U  R'  2U  L  U'  L'  2U  L")
        }
        function rotateCornerPieces() {
            perform("2R  2F'  R'  B'  R  2F  R'  B  R'");
        }
}
```

https://ruwix.com/the-rubiks-cube/advanced-cfop-fridrich/orient-the-last-layer-oll/

Rubik Ernö's prizes and awards

- 1978 – Budapest International Trade Fair, Prize for the Cube
- 1980 – Toy of the Year: Federal Republic of Germany, United Kingdom, France, USA
- 1981 – Toy of the Year: Finland, Sweden, Italy
- 1982 – Toy of the Year: United Kingdom (second time)
- 1982 – The Museum of Modern Art, New York selected Rubik's Cube into its permanent collection
- 1983 – Hungarian State Prize for demonstrating and teaching 3D structures and for the various solutions that inspired scientific researches in several ways
- 1988 – Juvenile Prize from the State Office of Youth and Sport
- 1995 – Dénes Gabor Prize from the Novofer Foundation as an acknowledgement of achievements in the field of innovation
- 1996 – Ányos Jedlik Prize from the Hungarian Patent Office
- 1997 – Prize for the Reputation of Hungary (1997)
- 2007 – Kossuth Prize the most prestigious cultural award in Hungary
- 2008 – Moholy-Nagy Prize – from the Moholy-Nagy University of Arts and Design
- 2009 – EU Ambassador of the Year of Creativity and Innovation
- 2010 – USA Science and Engineering Festival Award (Outstanding Contribution to Science Education)
- 2010 – The Hungarian Order of Merit Commanders Cross with the Star
- 2010 – Prima Primissima Prize
- 2012 – My Country Awards
- 2014 – Grand Cross of the Order of Saint Stephen (The highest medal awarded by Hungary)
- 2014 – Honorary Citizen of Budapest

wikipedia.org