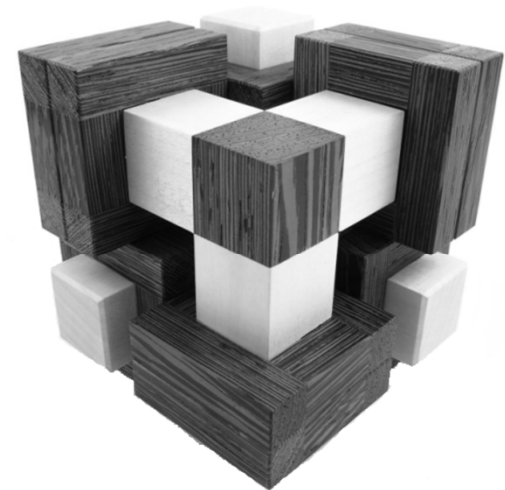
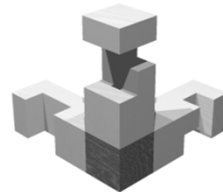
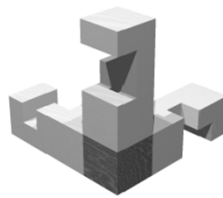
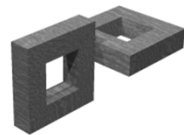
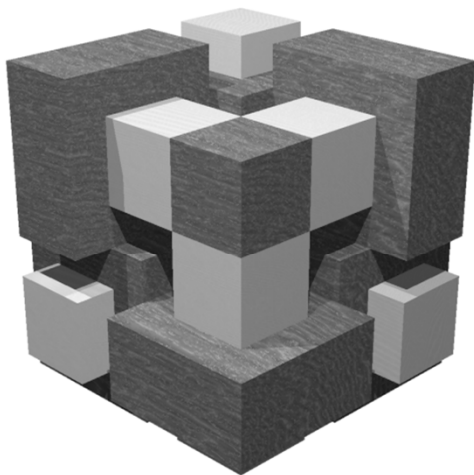


# Wooden burrs

## From design to implementation

Tamás Vanyó  
Hungarian Puzzle Party  
2023



# From design to implementation

- An initial idea
- Computer-aided design
- Implementation plan
- Raw materials
- Tools
- Making
- Surface treatment
- Ready puzzle
- Encore 😊

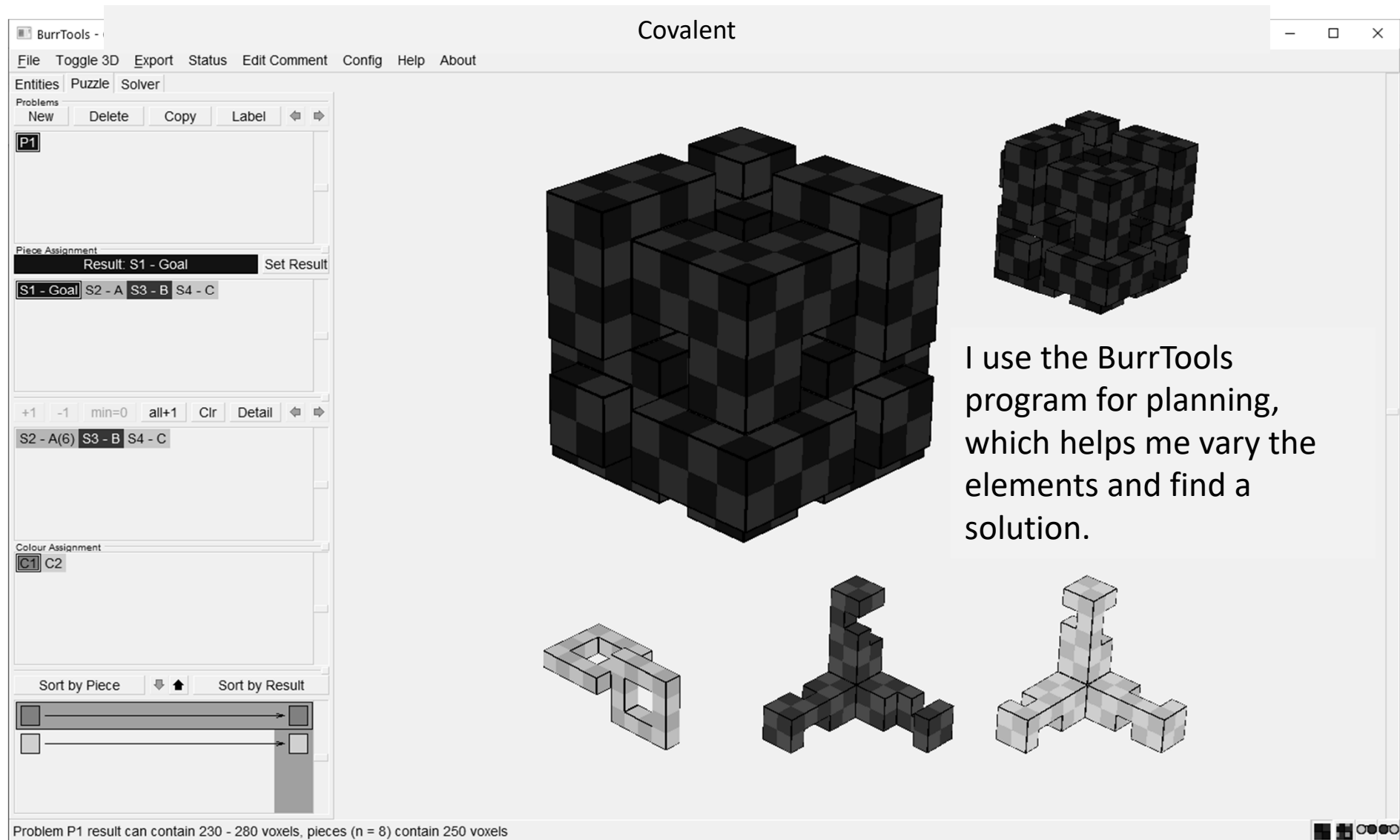
# An initial idea

Game ideas can come from anywhere and at any time:

- picture
- building
- statue
- thing I read
  
- sitting on a bus
- morning in the swimming pool 😊



# Computer-aided design



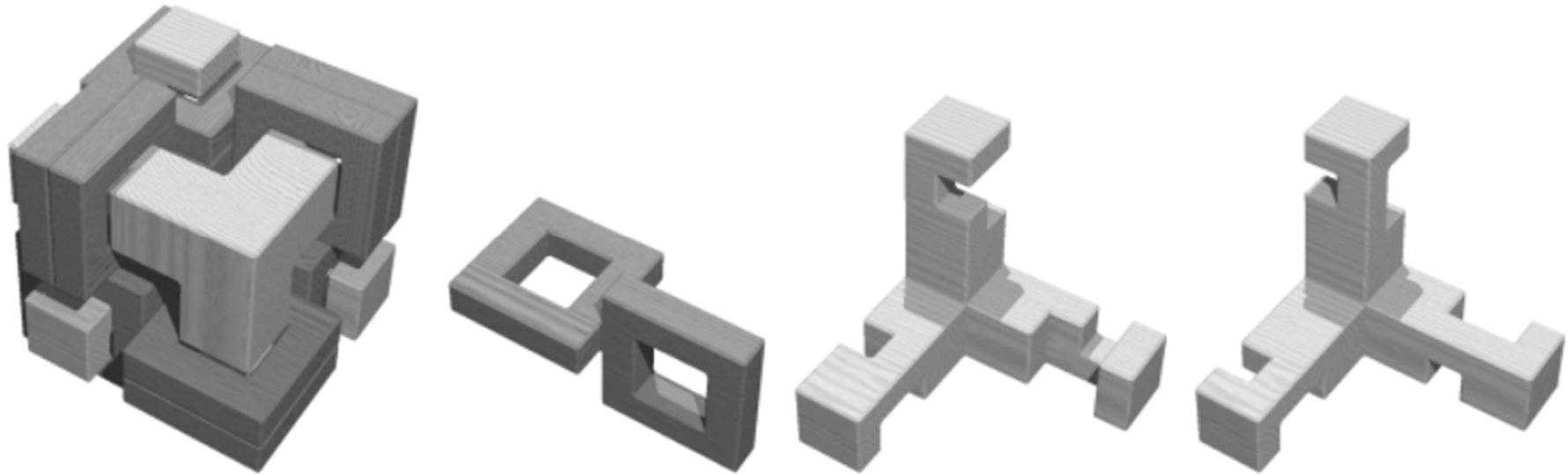
The image shows a screenshot of the BurrTools software interface. The window title is "BurrTools - Covalent". The menu bar includes "File", "Toggle 3D", "Export", "Status", "Edit Comment", "Config", "Help", and "About". The main interface is divided into several panels:

- Entities:** "Puzzle" and "Solver" tabs.
- Problems:** "New", "Delete", "Copy", "Label" buttons and a list containing "P1".
- Piece Assignment:** "Result: S1 - Goal" and "Set Result" button. Below it, a list of pieces: "S1 - Goal", "S2 - A", "S3 - B", "S4 - C".
- Colour Assignment:** "C1", "C2" buttons.
- Sort:** "+1", "-1", "min=0", "all+1", "Clr", "Detail" buttons. Below, "Sort by Piece" and "Sort by Result" options.

The main 3D view displays a large, complex 3D structure made of black and white voxels. To the right of this structure is a smaller, similar 3D structure. Below the main structure are three smaller 3D structures: a ring-like shape, a T-shaped structure, and another T-shaped structure. The status bar at the bottom reads: "Problem P1 result can contain 230 - 280 voxels, pieces (n = 8) contain 250 voxels".

I use the BurrTools program for planning, which helps me vary the elements and find a solution.

# Implementation plan



I plan to:

- What and how much wood is needed
- How I will saw
- How am I going to glue it
- Is there any reinforcement required for gluing

# Raw materials

A friend of mine who is a carpenter cuts me off the floor:

- 10x10 mm
- 20x10 mm
- 20x20 mm slats

I use domestic trees:  
acacia, peach, beech, cherry,  
walnut, maple, pear, oak



# Tools

I use Proxxon micromot machines:

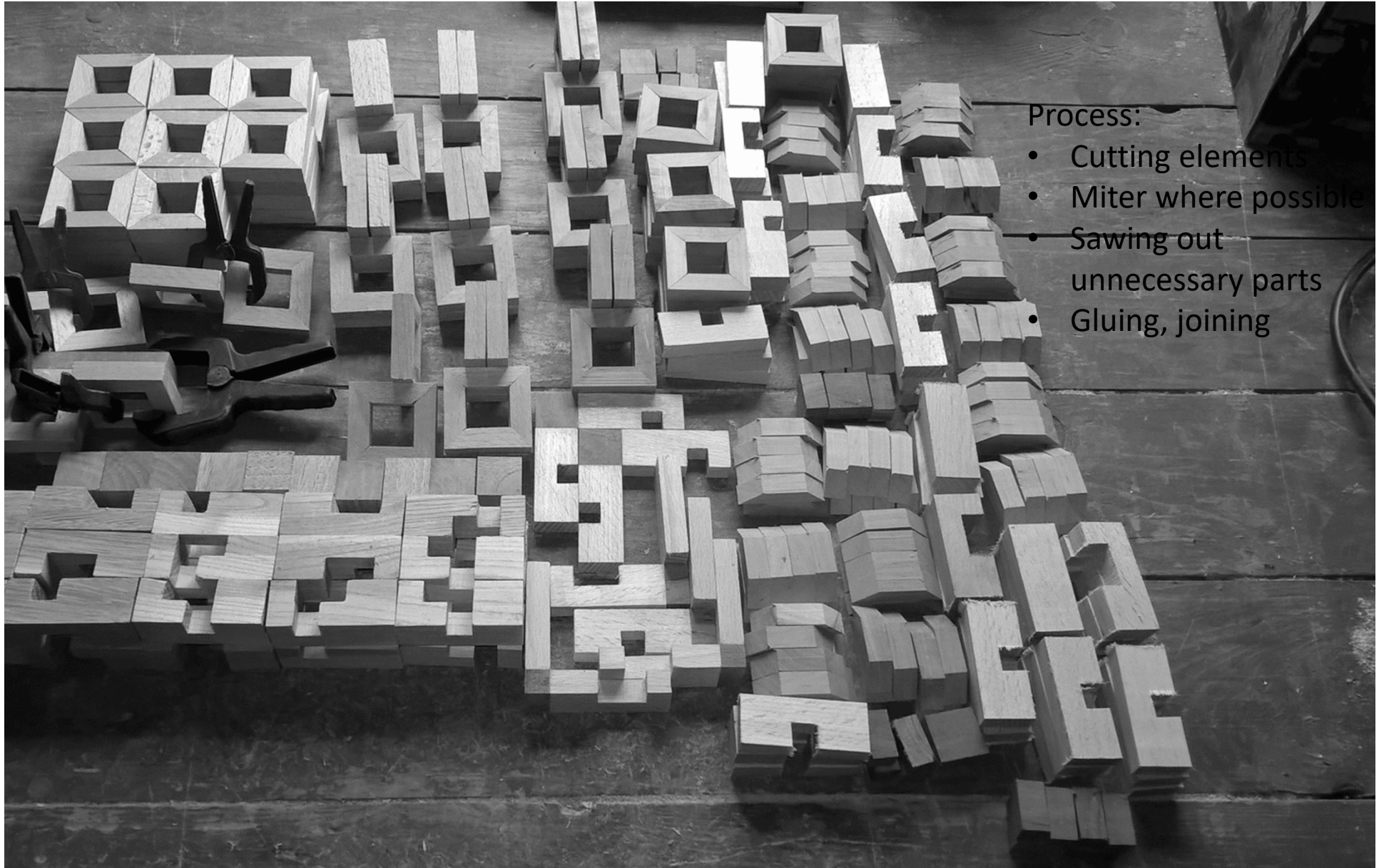
- Table saw
- Plane
- Maybe a sander

Other tools:

- Caliper
- Plain wood glue
- Self-made small slider for the table saw



# Making



Process:

- Cutting elements
- Miter where possible
- Sawing out unnecessary parts
- Gluing, joining



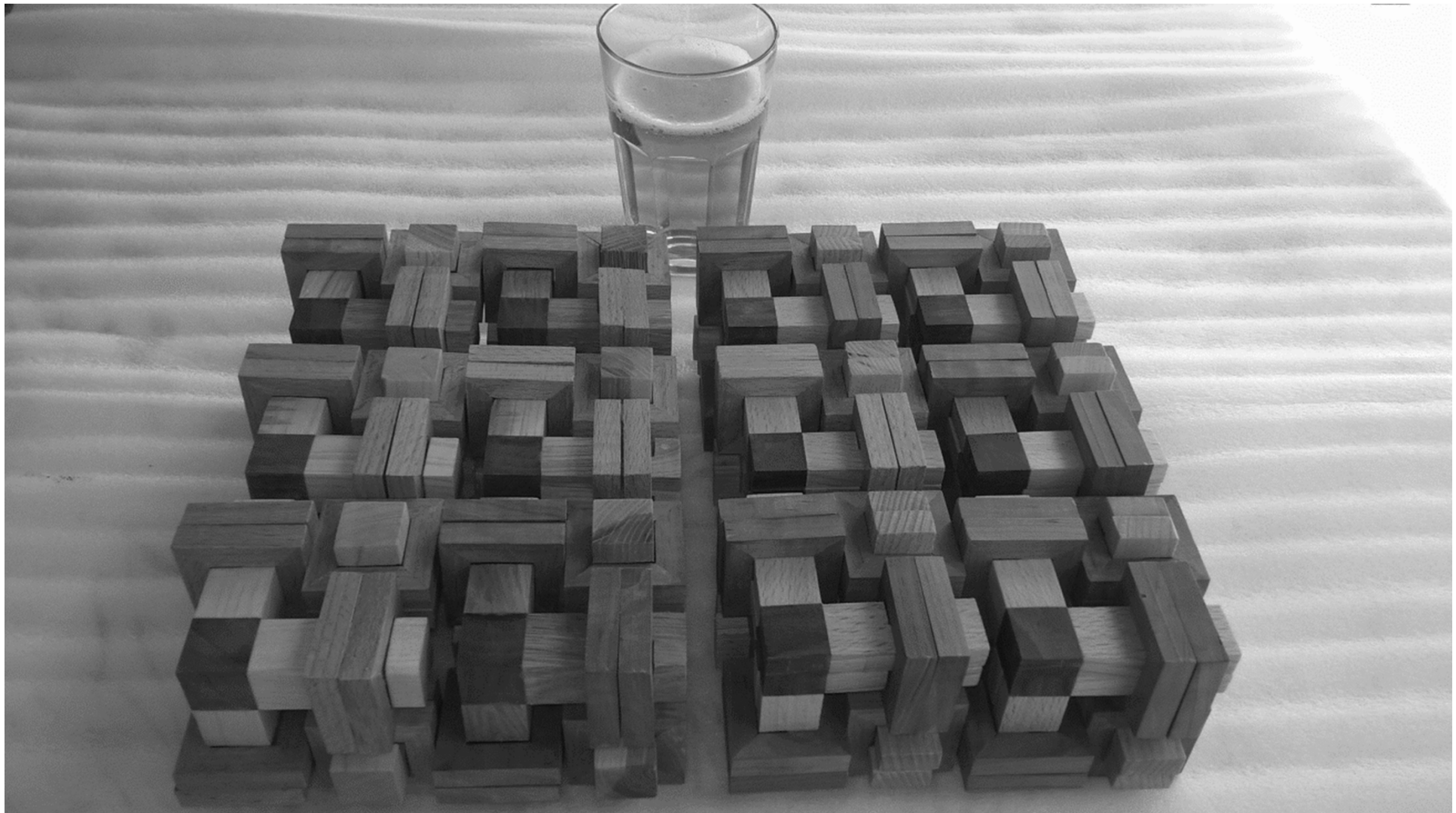
# Surface treatment



I use plain, simple IKEA wood oil

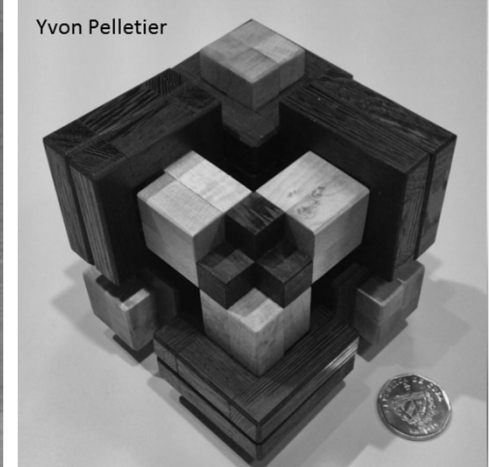
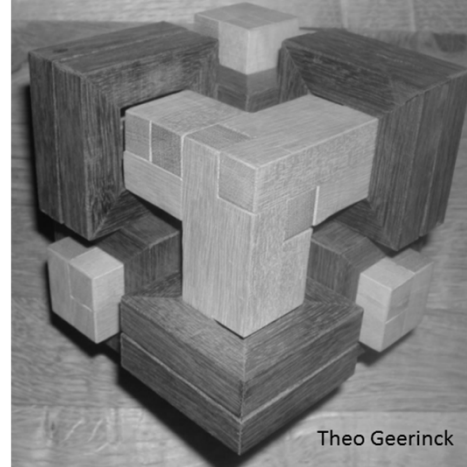
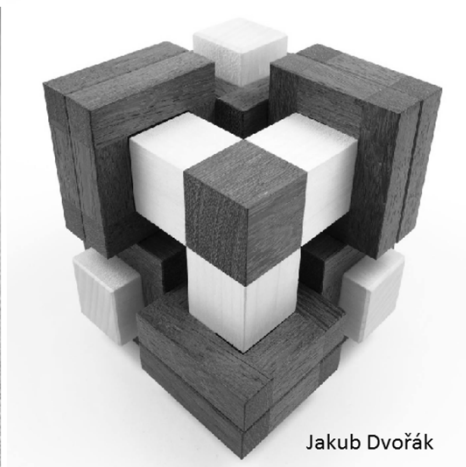
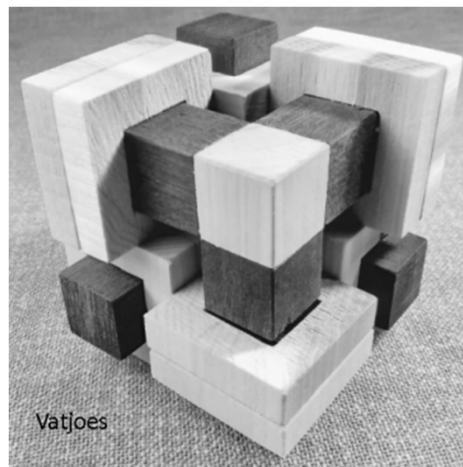
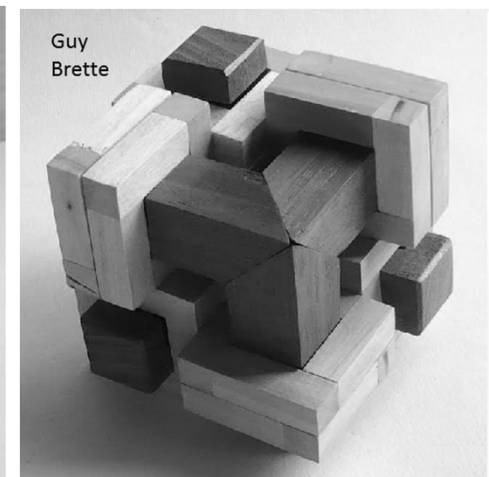
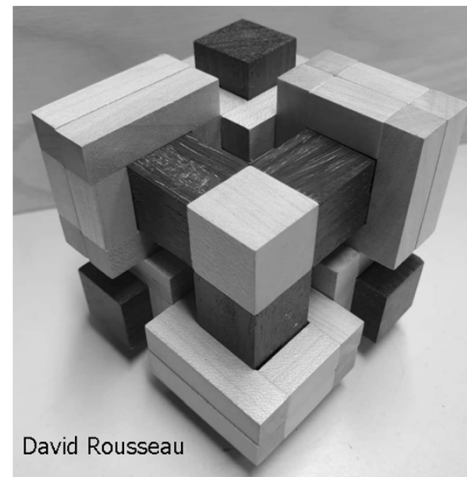
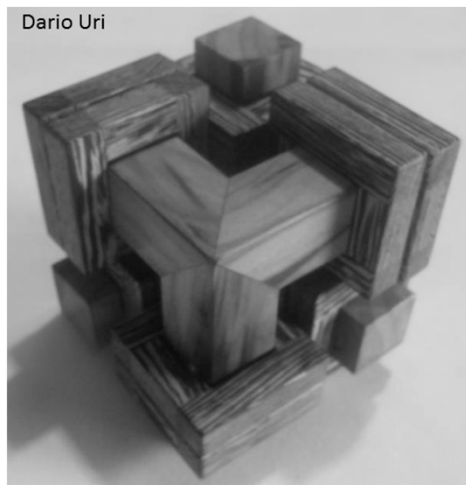
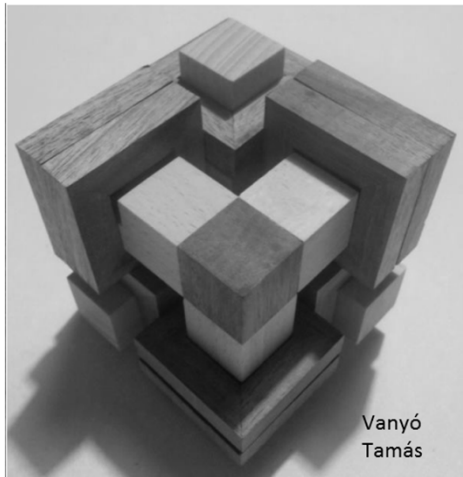
# Ready puzzle

The glass of beer is not part of the game, but the maker's reward at the end of the day 😊



# Encore 😊

Many people liked the design and made their own version for home use.  
And Jakub Dvořák (Pelikan company) produced and sold it in his web store.



Plans, contact details:

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Tamás Vanyó's puzzle plans



New puzzles

