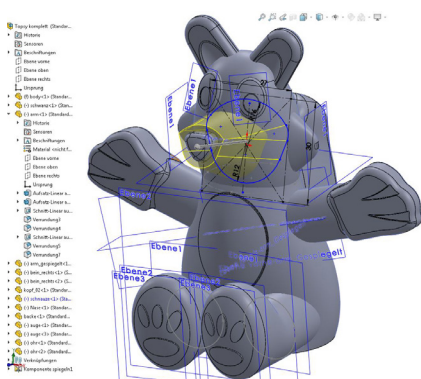


# From plush to chocolate

## Initial setting



Topsy is the children's mascot of UBS. There are Topsy cartoons, coloring books, radio plays, jigsaw puzzles, crafting templates, memory games, and a stuffed toy. UBS wanted to produce a chocolate version of the plush toy. The financial institution now wanted to have the plush figure as a chocolate figurine and has commissioned a chocolate maker.



## Challenge

The shape of Topsy offered many challenges. The form had to be adjusted so the finished part could be removed from the mold. It was especially important to pay attention to the feet. In addition, the figure had to be molded in a

sitting position. It was therefore important that the finished Topsy did not tilt.

## Proceeding

First, JATO-Düsenbau AG photographed the stuffed animal. A scan would not have been optimal here, because the figure had to be aligned exactly.

The photos were then drawn



into 3D-CAD and the coarse contours traced. Further details were added on the 3D model. The first 3D prints of the Topsy form were quickly produced using the FDM (Fused Deposition Modeling) method.

FDM works with a meltable plastic. This method is cheap and suitable for simple objects. The details that needed additional work became clear in the first 3-D prints: the head was too small and the draft angles had to be modified.

If Topsy's structures had to be more precise, the SLA (stereolithography) method would have been used. Here,

a light-curing plastic is cured with UV light in thin layers. The precision of this method is usually within 0.03 mm. To further refine the design, JATO-Düsenbau AG printed out individual body parts from Topsy to control smaller details, such as the depth of the groove on the fingers.

From the finalized Topsy-shape, a silicone negative was cast. The positive mold was vacuum formed at 500 degrees from a transparent plastic film.

During the three-week development process there was constant discussions with the customer. In the two-part mold then the chocolate was injected into the mold using nozzles of JATO-Düsenbau AG – after it was decided whether Topsy should also get a "make up" done: whether details in white chocolate are first poured into the mold and then the normal, brown milk chocolate is to be filled.

### Info

#### Used machines

Craftbot XL  
3D Systems MJP2500+  
EOS M290



#### Software

Solidworks 2017

#### Contact

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