# Faculty of Informatics

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# Large-scale 3D printing of urban areas

The Swiss Federal Office of Topography offers a variety of geospatial data including 3D models of the buildings. This data can be used, for example, to create 3D physical models of urban areas, such as cities and districts. 3D printers, however, impose limits on the maximum printable volume. The goal of this project is to develop an approach to divide a 3D model into parts, print them separately, and merge them to form a 3D model of arbitrary

Data retrieval and model construction

Mesh fixing, sub-divison and connection

Final adjustment, slicing and 3D-printing

Fixing non-manifold geometry, clean-up and simplification

Decomposition into pieces using BMesh API

Creation of lego-like connecting structure between objects